

MOTOR AGE

Vol. VII. No. 23

CHICAGO, JUNE 8, 1905

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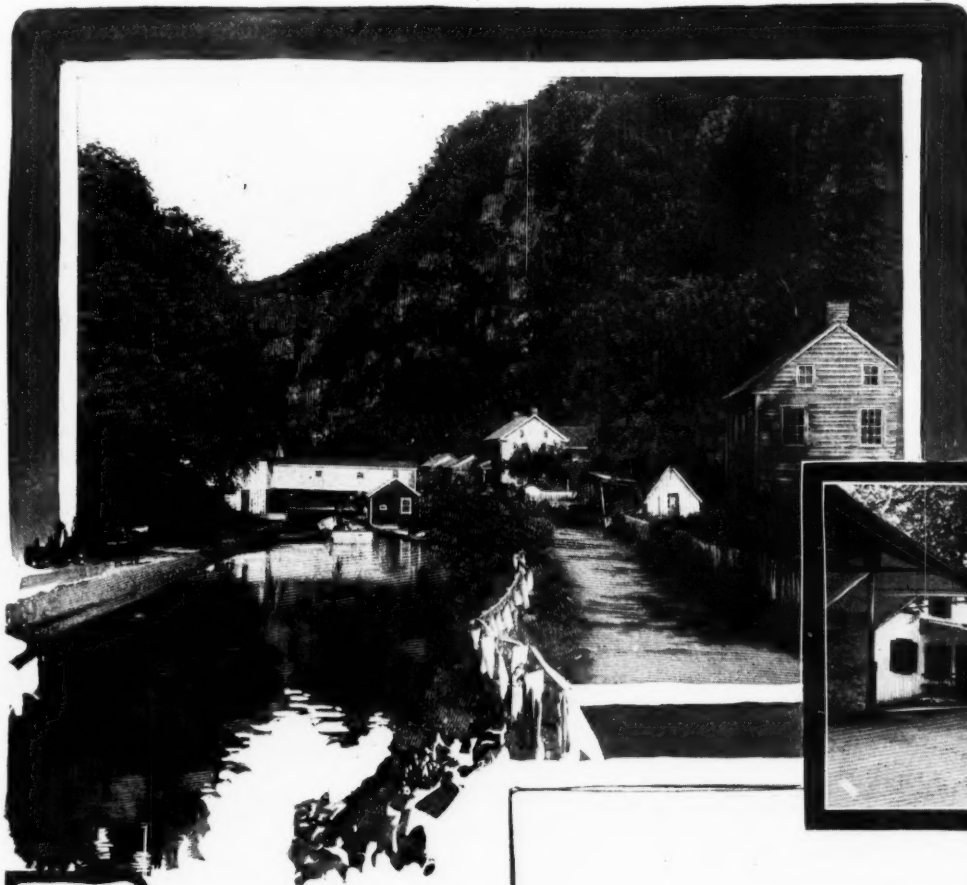
MOTOR AGE

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\$2.00 Per Year

OUT OF QUAKERVILLE INTO JERSEY



ideal one-day trips, or forms a perfect first day's run of a more prolonged trip, if such is one's desire.

To the southwest and west lie Baltimore and Harrisburg, with Wilmington and Reading midway points where the hungry Quaker may find supplies for the human economy as well as the necessary "go-juice" for his car. The intervening territory contains the finest farms in the world. From each succeeding hill-top the motorist looks down on a land literally overflowing with milk and honey—the beautiful Chester valley being traversed by the tourist bound Gettysburgward, for instance—or perhaps the idea is to extend the tour across the mountains and down the Shenandoah Valley.



HUNTINGDON VALLEY OLD SECOND STREET PIKE



HE automobilists of no large city in the country are better situated as regards a diversity of driving territory within easy reach than are those of Philadelphia.

To the east, radiating like spokes in half a wheel, branch out from Camden the many pike roads which the liberal road policy of the state of New Jersey is rapidly making a land of delight to the motorist who prefers level highways and a possible break-away when he thinks the eye of the road constable is turned in another direction. In this direction the Philadelphia automobilists hie them in large numbers at each week-end, bound—75 per cent of them—to Atlantic City by way of the famous White Horse pike. The other 25 per cent is either en route for South New Jersey over the Woodbury pike; to the North Jersey shore resorts by way of Mount Holly; or to Trenton and the Oranges over the old Burlington pike. Any of these routes furnishes



OLD YORK ROAD, PHILADELPHIA TO NEW HOPE

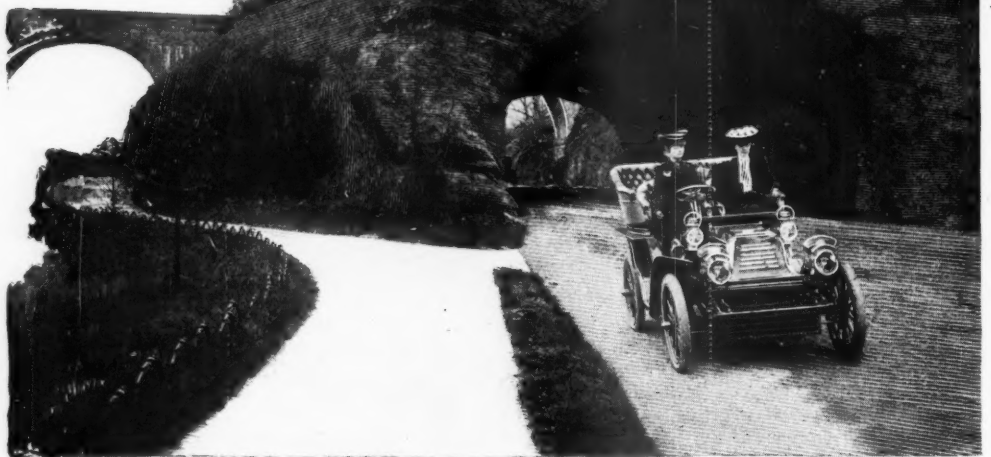


LINCOLN DRIVE

All this territory is as rich in historic spots as it is from an agricultural viewpoint.

The trip to Harrisburg by way of the Schuylkill and Lebanon valleys is another favorite trip for Philadelphians. It's an up-hill-and-down-dale route over good roads that is all the more enjoyable from the natural fighting instinct which lurks 'way down in every one's soul and which makes him gloat over the constant succession of victories as his sturdy little engine thumps away steadily and wins each succeeding hill-top. Then follows the swoop down to the foot of the hill and the coast quarter-way up the next, the enjoyment of which can only be guessed at by those so unluckily situated as to be surrounded by miles and miles of flat prairie country, which, while it may render the strain on the engine somewhat less severe, soon grows monotonous to the eye and the brain.

The real automobile tourist is not he who thinks alone of sand-papered roads, and of the number of miles covered, but the one who can subordinate mere miles and speed to the artistic instinct—the one who, when he reaches



EAST RIVER DRIVE—TUNNEL THROUGH SOLID ROCK AT RAILROAD BRIDGE

a hill-top where nature spreads forth a vista of loveliness miles in extent, or when a delightful bit of river scenery comes into view as he shoots around a bend in the road, can reach for the lever and stop his car, and sit awhile and drink in the loveliness with which Dame Nature is so lavish in many spots in Pennsylvania but a very few hours' run from its metropolis.

To such the section to the north of Philadelphia affords numerous opportunities to enthuse. Take the automobilist who plans a one or two-day trip, for instance up towards the Delaware Water Gap or the Pocono region. Starting from the city early in the day, via the Old York road, he will have reached Willow Grove, the greatest amusement park in the world, in 45 minutes. Here the road branches—to the left would be more direct, but more hilly. Perhaps, as he is not pressed for time, it will give variety to come back that way. Well, to the right then—and away he bowls cross-country, still over the Old York road, to the Delaware, which he reaches at New Hope, passing en route numerous country villages and a succession of charming vistas of agricultural beauty as the road dips to meet the numerous tiny tributaries which feed the Delaware and rises again to the next summit. Reaching the river, a sharp turn to the left

brings the tourist to the river road, and there's the river as close as he can to his right. True, no losing the way now, so long as he keeps the road, which is none of the best in spots; but the scenery!—that repays one for abandoning the highways for once, and seeking the byways. Each mile brings the tourist nearer the mountains, but the faithful old road pushes its way around the foot of the hills—which a few miles above will abandon that diminutive title,—following the stream in its every winding.

At Narrowsville the Delaware seems to have literally forced its way through the foothills, grudgingly giving room for the road and the Delaware and Lehigh canal; which parallels it, and here the tourist is given his first real glimpse of what nature can do in the way of combining river and mountain in making up a picture. There are many of these charming spectacles awaiting the automobilist who will break away from the beaten path once in awhile, and try these roundabout routes. Passing through Easton, still following the river, the tourist keeps on to Martin's Creek, where, if he wants level roads, it would be well to cross onto the sacred soil of Jersey, recrossing into Pennsylvania at Portland, and thence on to the Water Gap. Should he, however,



ON BALTIMORE PIKE TO WESTCHESTER

prefer the mountains, he will follow the Wind Gap route via Nazareth, Saylorsburg and Stormville. The latter is the more direct; both offer much in the way of scenery. The lover of variety can cater to his hobby by selecting any of the route variations mentioned above for his return trip, and on reaching home will agree that he never spent a pleasanter or more profitable outing.

Perhaps one prefers an afternoon's trip to Valley Forge, that revolutionary landmark, which is now a national shrine and is being beautified in accordance with elaborate plans formulated by a commission appointed for the purpose. This is best reached by way of the old Lancaster pike, one of the oldest roads in the country—in days ago the great highway to the boundless West, and over which our fathers traveled in their Conestoga wagons. There are a dozen ways in which to reach this famous old road, which is bounded on either side by the magnificent estates of the Quaker City's elect, and is kept in the pink of condition at all times. But the automobilist must be careful, for he is now in the "trap country," where wily constables lie in wait behind clumps of bushes, stop-watch in hand, ready to pounce upon the unsuspecting tourist who may be unaware or who may forget just where these minions of the law have measured off their $\frac{1}{2}$ or $\frac{1}{4}$ -mile stretches of road. It will be well for the tyro to navigate with particular care every bit of going which seems unusually tempting—for it is in such places that these gentry are prone to set their traps.

Passing through Overbrook, with its famous Augustinian seminary; Haverford, with its celebrated Quaker college; Bryn Mawr, with its world-renowned educational institution for young women, and Villanova, with its well-known Catholic seminary for boys, the "sand-papered" pike is followed to Berwyn, where a right-angle turn over the Pennsylvania Railroad brings the traveler to the summit of Cassatt's hill, when there bursts into view on the left the wide expanse of the Chester valley. A glorious coast, under brakes, and in a few minutes the floor of the valley is reached, and then follows a 6-mile ride to "the Forge." It's only 22 miles from the garage, and is one of the pleasantest and most popular short trips out of Philadelphia.

Coming home the usual plan is to vary the route by taking the old Gulf road through King-of-Prussia and Gulf Mills to Montgomery avenue, which from Bryn Mawr parallels the Lancaster pike all the way in to the city line.



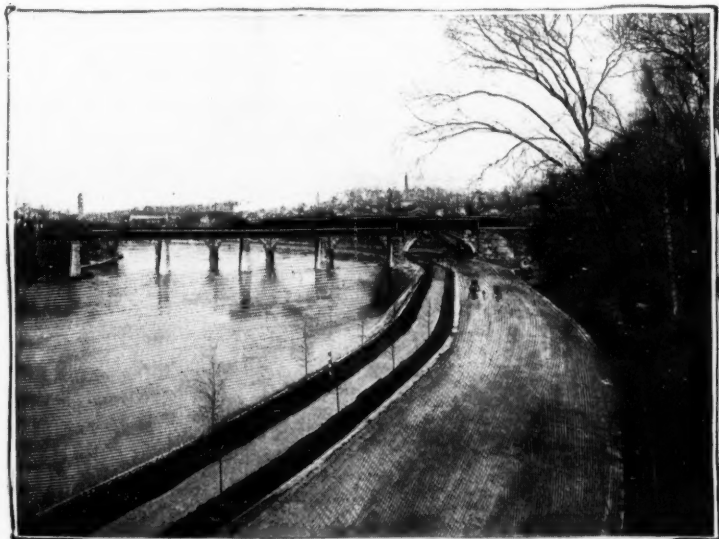
TOP CATSKILL HILL

Here a turn to the left will take the traveler down into the Schuylkill valley once more, crossing the river on the City Line avenue bridge and thence to the East River drive in Fairmount park.

Another short trip much affected by Quaker motorists is that to West Chester by way of Media. Besides its natural beauty there is an added attraction in that at each mile or so it is not necessary for the traveler to dig down into his jeans for toll—for that anachronism still flourishes on many of the pike roads round about Philadelphia. Incidentally, this feature of paying toll is the only respect in which the Quaker automobilist hasn't "something" on the majority of his brethren residing in other large cities. In a car that is making, say, 15 miles an hour those confounded toll-gates seem to loom up with the regularity of mile-stones, and, like death and taxes, they cannot be dodged. It is not to be wondered at, therefore, that the motorist travels down West Chester way occasionally, if only to experience the satisfaction of using the road without being compelled to fork out at inconveniently numerous intervals.

Northeast of the city, up Huntingdon valley way, is an excellent country for automobiling. This section is best reached over the Old Second street pike, passing through Feltonville, Olney, Lawndale, Fox Chase and Bethayres. Just at the latter place the road swoops down a long hill into the Huntingdon valley, at the foot of which nestles the little village of the same name with its antique Lady Washington hotel. The crystal water from the pump at the old hostelry is celebrated in itself, and will be found equally effective as a "chaser" or for injecting into the cooling system of one's automobile. Coming home, a short ride across country either to the west or east, and over passable roads, will bring the traveler to the Old York road at Hatboro or to the Newtown road at Somerton—whichever he prefers. Either will prove a pleasant variation and will furnish unexpected glimpses of bucolic life almost at the very gates of the Quaker City—for most of the country he will have traversed during the trip lies but a few miles beyond the city line.

And then magnificent Fairmount park! What a wealth of opportunity it affords the local or visiting motorist for indulging his



EAST RIVER DRIVE—FALLS OF SCHUYLKILL



LANSDOWN DRIVE, WEST END GRAND AVENUE



ON OLD GULF ROAD, PASSING FAMOUS KING OF PRUSSIA INN

hobby! Its 3,300 acres, more or less, are accessible to their remotest points by well-kept roads, and it is possible to travel upwards of a hundred miles over them without repeating. Extending along the entire sweep of the Schuylkill river from Fairmount dam to the Falls of Schuylkill extend the East and West river drives, the latter probably the best-traveled park highway in the country. No expense has been spared in building these roads, many heavy cuts through solid rock, and even a tunnel through a rocky bluff which forms the east support of the Pennsylvania Railroad bridge, giving evidence of the costliness of the operation. These roads follow every curve and winding of the beautiful stream, and at their upper end near the thriving manufacturing suburb of Falls of Schuylkill, sweep around in almost a half circle under the Reading Railroad bridge—the West River drive to its terminus at Riverside, and the East drive to join the famous Wissahickon drive.

Unfortunately the lay of the land along the beautiful Wissahickon creek is such that the necessarily narrow drives in some places afford sufficient space for but two vehicles abreast. Above Rittenhouse street, therefore, according to the ukase of the park commissioners, the automobilist is persona non grata. This is to avoid the possibility of accident. A sign conspicuously posted announces the fact, and woe to the motorist who transgresses the law in this particular! Occasionally a visitor whizzes across the dead line, but a shout from the guard stationed there halts him instantly. An explanation follows, and the culprit is let off with a warning. His tag number is taken, however, and a second transgression will cost him dearly.

Within a few years the drivers and automobilists of historic and aristocratic Germantown have succeeded in having a splendid new road built to connect their suburb with Fairmount park. This beautiful highway, which debouches into the Wissahickon gorge at Rittenhouse street, has been named the Lincoln drive. It is an elegant specimen of road

building, and is much affected by local automobilists. The grade is so gradual that even the little single-cylinders can climb out of the Wissahickon valley via the Lincoln drive on high speed; besides, the road is so wide and safe that difficulty in the way of horse-frightening is seldom experienced.

At the west end of the Girard avenue bridge a turn to the right under the arches of the same Pennsylvania Railroad bridge under which the East River drive tunnel is driven at its eastern end, shows the beginning of the Lansdowne drive, which runs to Belmont heights and the section of the park rendered famous by having been the site of the famous Centennial Exposition of 1876. This is a favorite route to the Lancaster pike and the "trap country," and some of those automobilists who drive outwardbound over this road in all the pride of Yellow Perilism have been known to come back minus several simoleons as the result of an encounter with the bucolic Videocqs of Lower Merion township.

Truly the lines of the Quaker automobilist—despite the tolls and the traps—are cast in pleasant places as regards diversity of going and beautiful scenery, whether he confine himself to the highways or seek a change from the monotony by seeking pleasure on the byways.

A TEXAS STRAIGHTAWAY

Galveston, Tex., June 3—Texas is about to go in for a cup course. At Galveston there is a straightaway beach 30 miles long, and E. H. R. Green has been to the course to make try-outs for his machines, the Packard Gray Wolf and the Pope-Toledo Yellow Wasp. Last week Ollie Savin drove the Yellow Wasp over a mile of the course in 56 seconds flat, and was followed in 57 by the Gray Wolf. The beach has no turns and only needs to be cleared of rubbish washed ashore. There is an average width of 200 feet for the entire length, and it is as smooth as a floor, except for a few shallow bayous cut in by recent rains. The existence of these bayous was the only reason that Mr.

Green did not make some 25-mile trials over it.

At this time of year the tides are irregular and during the week Mr. Green was here he only had 4 days of tryouts for his cars. He is enthusiastic over the prospects for the course and proposes to interest eastern automobilists and will build a clubhouse on the course 10 miles from the city. Good roads and streets lead to the beach. The climatic conditions are far superior to many other winter courses. The lowest temperature during the past winter was 29 degrees, and then for only a few hours. The facilities are equal to those of any course on the Atlantic seaboard, except for hotels, and because of this Mr. Green proposes to include a large cafe and ample rooming accommodations in the construction of the clubhouse, besides a garage sufficient to accommodate fifty cars. There are also several cottages contemplated for the accommodation of the help. After this is accomplished it is proposed to construct a grandstand. The clubhouse will be built over the water on piers and will be so constructed as to permit additions as often as required.

Not only will this place be attractive to automobile men, but owners of motor boats will find in the waters of Galveston bay one of the finest courses to be located in the United States. A straightaway channel lies in front of the city for 10 miles. Texas enthusiasts in both branches are awakened to the fact that Galveston has the best and most attractive features of this kind and are laying plans for its development. Local automobilists and boat owners are rushing their plans in order that they may be laid before the eastern men before the close of the summer season.

FOOLED THE JOKERS

New York, June 3—Robert E. Fulton, manager of the Pope garage, who was married this week, turned the tables on a bunch of practical jokers. Fulton's wedding trip was to consist of an automobile tour on Long Island, to be begun immediately after the wedding, and friends were on hand with a half a dozen cars, prepared to chase him.

Fulton had one car in front of the bride's house. Rushing down the steps with Mrs. Fulton he leaped into the car and sped away, followed by the six cars of the persecutors. Fulton and his bride returned to the Dorilton, apparently having surrendered. Running through the corridor they emerged from a side entrance into an alley. Fulton had a second car ready. The jokers thought they had the pair cornered. Mr. and Mrs. Fulton, however, jumped into the second automobile, dashed through the alley and were off for the ferry. When the pursuers reached the ferry the gates were closed.



SAMPLE OF NEBRASKA MUD

TRANSCONTINENTALISTS CROSS WYOMING

Sage, Wyo., June 5—Special Telegram—Our run from Julesburg to Cheyenne was the best we had had for several days, and we naturally enjoyed it. We arrived at Archer, 8 miles from Cheyenne, at 8:30 in the evening, and were met by a crowd of automobile enthusiasts, among them being Mr. Ollier, one of the western Oldsmobile representatives. After a series of handshaking we left and arrived in Cheyenne at 10 o'clock.

If you had seen that procession coming into town you would have smiled. You would have seen Old Scout towing another car, besides carrying two passengers in each rig. We will not mention the name of the car, because it might cause some hard feelings. We stayed in Cheyenne until 3:45 the next day, putting on supply tanks to cross the desert. Then we drove to Laramie and spent the night.

We left Laramie the next morning in company with a White steamer bound for Goldsmith, the party having left Denver the day before. We left the town at 8 a. m., taking a northwesterly course over the old emigrant trail towards Medicine Bow. We had good roads for about 20 miles, then we ran up against a small river. The only thing to do was to cross, so Old Scout took a flying leap and managed to get over, but not so well with the steamer, for she stopped in the middle and her fires went out. Rope and tackle were used and in about an hour she was on dry land. In the next 4 hours we had forded four streams. Wigle and I got as far as Medicine Bow at 7 o'clock and decided to go farther, but just outside of the village we ran into the worst sink hole on the trip, and Old Scout dropped almost out of sight. We got two men to help us and with the aid of our tackle got on land as darkness overtook us. I hired one of the men to watch the car and Wigle and I went back to the village to bed, Old Scout staying out in the cold.

We left Medicine Bow the next morning at 4:30, thinking we would make a long run that day. At 1:30 we were at a small station on the Union Pacific and just 35 miles from our morning start. I don't want to say much about the roads between these points, because it takes more than a pen to describe them. I don't know how Old Scout ever lived through it, but she did. We forded five big creeks, drove over rock and stones and so much sage brush that Old Scout's radiator looks like a badly twisted piece of tin. But at last we found the railroad and we both have sworn to stick by the Union Pacific the rest of the trip.

We arrived at Rawlins at 4 o'clock Saturday afternoon, secured some gasoline and drove to Creston, a small station 35 miles west. We stored our car in the Union Pacific section house, stayed with the section boss over night, and left Sunday morning at 8:30 for Rock Springs. We arrived there at 6 p. m., after covering 100 miles of pretty fair roads. We took some more gasoline and drove 15 miles further to Green River, where we spent the night. Wigle and I are as brown as Indians and very badly sunburned, my nose shedding a coat of skin every day. We are both well and strong and seem to be getting tougher every day.

We left Green River Monday at 8:15, just four weeks after we left New York. We en-

countered some sand, but the roads were fairly good. We arrived at Granger at 11:30, and there being no other place to eat dinner within 25 miles, we stayed there, but lost nearly two hours in doing so, as the cook was slow. After leaving Granger the roads improved some. We saw numerous ranches near the road and thousands of sheep and cattle. The everlasting sage brush is still visible, but not quite so thick. It is the worst nuisance we have to contend with and causes bad language. Our tires are showing the hard knocks, caused partly by having our axle bent and also being 56-inch tread and the road wagons here 60.

We passed through Nugget Canon, a few

DOBBIN TO THE RESCUE



PATH
ALONG
THE
RIVER
BANK



SMALL STRETCH OF DECENT GOING

miles east of Sage. The scenery was beautiful, but the roads very bad. As it was getting dark we could not take pictures. We finished the day by driving to a small station called Sage, a very familiar name to us. We have found the Western people cordial, especially the railroad men, who try their best

"ROADS" ALONG UNION PACIFIC TRACKS



to make evenings pleasant and direct us on the best roads. I have been very fortunate with my tires, and have had but two punctures since leaving New York. There is yet 150 miles to Pocatello, which we will try our best to cover tomorrow.—Dwight B. Huss.

YACHTSMEN MOTOR-STRUCK

Milwaukee, Wis., June 5—Pewaukee lake, the center of one of the most popular summer home districts of Wisconsin, will have the motor fever in an advanced degree this summer. Motor boats will dot the lake, which is about 30 miles west of Milwaukee, and plans are on foot to organize a club and hold races on a systematic plan. The new boats which have been ordered by a dozen or more of the yachtsmen have begun to arrive and it is expected all the craft will have been placed in commission by June 15. The subject of motor boat races will be taken up by the Pewaukee Yacht Club.



CONVINCING THE GREAT PUBLIC

THE great American public is by no means slow to grasp anything that is good; it is an up-to-date public in all the words imply. But this same great public is one which must be convinced before it fully makes up its mind. It has been partially convinced of the pleasure and even the utility of the automobile. By no means, however, has the entire public been brought to this state of mind, and it will doubtless require a number of years to switch it around to that way of thinking so many have reached. It is utterly useless to simply talk and write about the automobile in order to show people what it will do—talking and writing in the usual forms are taken as so much advertising and with the usual grain of salt by many people.

It cannot be denied that the practical demonstration is by far the cheapest, quickest and surest form of conviction. It is nearly two years since the American makers held an endurance contest, but that one was of such a pronounced nature that it did more to convince the public of what the automobile could be depended upon to do than all the advertising and all the talk and all the writing that have been thrown out since. That one contest settled the matter in the minds of thousands and those thousands are now owners of automobiles.

England and France persistently cling to a number of annual events of this character, furnishing the details of the affair that the public may know not only the weaknesses but the successes of cars—and on the outcome of these trials the public buys. To successfully go through such a contest is not necessarily a difficult task, but the act of going through is convincing to the public that this or that machine is at least built to do such work, will do it, and is good enough to buy.

The commercial tests held annually in New York have been the means of showing to the world the economy and utility of the commercial car, and within the past year or so the business in this particular line has grown wonderfully. So also has the business in pleasure cars, it is true, but there are growing factories, and new makers, and competition is becoming keener each day, so that the time is not far away when the makers will have to seek business more diligently than most of them have had to do in the past. There is more business to be had, the American builder can build more cars, and all that is necessary to procure this additional business is to convince not only the city resident but the man from the country, who really can find more use for an automobile than can the resident of the city.

There is just at present a remarkable demand for automobiles and many makers are finding difficulty to keep up with the demand.

It will not always be so, however, and while the demand will probably increase year by year it must be remembered that competition usually sets too hot a pace for the demand. The result is apparent. The good advertiser is the one who advertises most when he is the busiest, so as to create a demand for his wares and keep the shop going all the time. Automobile manufacturers are busy now, but to establish themselves on a solid foundation they, too, should advertise when the busiest. No manufacturer has ever been burdened with too great a market, and even today America's foreign trade is on the increase, as it should be. There are Americans who have not yet been convinced that American automobiles are as good as those built abroad. They ought to be convinced and when they have been the American manufacturers will pocket another million or more annually.

There is not a maker of prominence who would not welcome the annual endurance contest, even were it to be run under the unfavorable conditions which characterized the last affair, but which gave to the world a better opinion of American cars than almost anything could.

There are so many organizations in the motor world fitted to take up such a matter

WHERE TRACK RACING FAILS

EVEN this early in the racing season there has been ample evidence that unless there are many changes in the present form of automobile track racing this sport will all too soon decline as a public-appreciating affair. It is not enough to offer an attractive program, with a score of stars entered in each event to satiate the public. The public is a keen observer of competition, whether it knows anything about the intricacies of automobiles or whether the speed developed is anything of a wonderful nature.

The contests which have been seen on the tracks so far this season, with a few exceptions, have been one-sided affairs of a pronounced nature, with many of the entrants as non-starters or with their having failed to finish at all after one or two fast cars have left them hopelessly in the background.

There is no sport in seeing Barney Oldfield or Webb Jay or any other star romping around a track with his nearest competitor anywhere from a quarter to a half mile back and without the least hope of being near the finish to make a close contest. The public must be looked to to support track racing and the public will by no means submit long to such contests, which may be good for the racing man who is ahead but decidedly poor for anybody else.

that each leaves it for the other to do, but that some one ought to take it up cannot be denied. The cost for the amount of good it will do in a general advertising way—not advertising in the sense of selling a particular car, but to show the public what is what—is so small that it is doubtful if it is worth considering. Compared with 1,000-mile tests and track records it is far the better proposition, not only for the maker but the seller and the buyer. In line with this very argument, the French makers seem to be of the opinion that reliability competitions are to be encouraged, while only a few take kindly to the road and track events with their attendant heavy expenses incurred in building special cars and in the costs of the races.

The contest of 1903 gave the promoters the experience necessary to now conduct one with little or no difficulty. It gave to the makers a better idea of what was needed in a car for American roads than anything else could, and it was the means of producing cars free from many of the little mistakes that were found to exist.

Does anybody pretend to say that today either foreign or American cars are perfect? Is there a maker who will not admit that such a contest would teach him that in some little particular his production would bear improvement? If he will admit this, the needs of the endurance contest is all the more apparent; if he does not admit it, he will doubtless find it out sooner or later and perhaps at a cost far greater than that of participating in the run.

Such a contest if held at all should take place not later than September, when the roads are at least in a passable condition, and not in October, when weather conditions are too unsettled to make the affair anything but a swimming match. There is ample time to arrange a contest for the coming September, and it is safe to predict the majority of makers would welcome it for the benefit of themselves and their agents and for the further desirability of teaching skeptics that they are on the wrong track about the automobile.

There is but one way this can be remedied with any degree of success, and that is to form some basis of classification, so that there shall be a somewhere near equality in the cars which are to compete. Just what this classification is to be will require much study upon the part of those in authority, assisted by those of experience, including, possibly, the racing men, who could at least give a deal of wholesome advice.

Road competition has an entirely different aspect, for here, while the cars are possibly miles apart, there is an expectancy which naturally seeks to keep up the interest of the spectator and which gives him or her an opportunity to do a little estimating on the chances of each contestant. There is seldom lack of interest in such a contest as the Gordon Bennett or Vanderbilt race, particularly when run over a course where competitors are in sight one minute and out another.

But to see all the cars on a track strung out as in a procession is robbing sport with a vengeance and will all too soon kill it entirely. and the sooner the racing board of the American Automobile Association takes up this matter with a determination to remedy a growing evil and one with which the public is fast beginning to complain, the better it will be for automobile track racing.

Jump Sparks

For the coming year it is a question who will not build four-cylinder cars, rather than a question as to who will.

It's a good deal less painful to a humane person to see an automobile motor become overheated than to see a poor horse in a similar fix.

The French automobile papers and the French manufacturers are again worrying about foreign competition, and they give sufficient reasons to cause them to worry, too.

It was up to Barney Oldfield to redeem the reputation he lost at the Chicago meet and he redeemed at Milwaukee. This switching about of form is probably one of Barney's advertising jokes.

If anybody says automobiles have been the means of making orphans the world should bear in mind that they are doing all they can to make the orphans happy by giving them an outing once in a while.

When the good people of Milwaukee deliberately forsake the ordinary walks of life and beer to attend an automobile race meet, it may be taken for granted the automobile has come to stay, as the country paper remarks occasionally.

After being advertised for 8 months or more the much-heralded French reliability trial had as starters six automobiles and two motor cycles, all of which indicates that the French do not appear to be anxious to demonstrate the reliability of their cars.

Here's a good joke on Barney Oldfield: After having paid several hundred dollars for sanctions for southern and western race meets at \$50 per, he discovered that, being a member of the A. A. A., he was entitled to sanctions for \$10 each. It is to be hoped he will get his money back, but, in the language of the street, he probably has a fine chance of doing it.

Just because car No. 1 won the Gordon Bennett race the first year, No. 2 the second, No. 3 the third, No. 4 the fourth and No. 5 the fifth is no sign No. 6 will win this year. At least it is safe to wager against such a thing, even if all the contestants are trying to secure No. 6. Nevertheless these are remarkable coincidences, and even an ordinary mortal might be excused for being a little superstitious over them—that a Frenchman should, however, is not particularly strange.

What will please the society automobilists and automobilists in general is the announcement that the concluding event on the program of the Pike's Peak hill-climb meeting will be a gymkhana open to the entire world.

Don't smoke cigarets or scare horses with automobiles in Indiana or you'll be up against the real thing.

If it takes only one Barney Oldfield to make a successful race meet, what would a meet be if it had a dozen with Barney's reputation?

Philadelphia has just found out that motoring is pleasant and its inhabitants are after cars by the wholesale. Pretty soon St. Louis is liable to be heard from.

Texas now comes to the front with the best straight-away beach course ever seen, which suggests that the straightaway business is becoming pretty keen these days, and that Senator Morgan must be on the jump.

When the high moguls of an automobile factory have to take to trolley cars, bicycles and shank's mares just because they have sold all the cars they can make, including back numbers, it is a pretty state of affairs, isn't it?

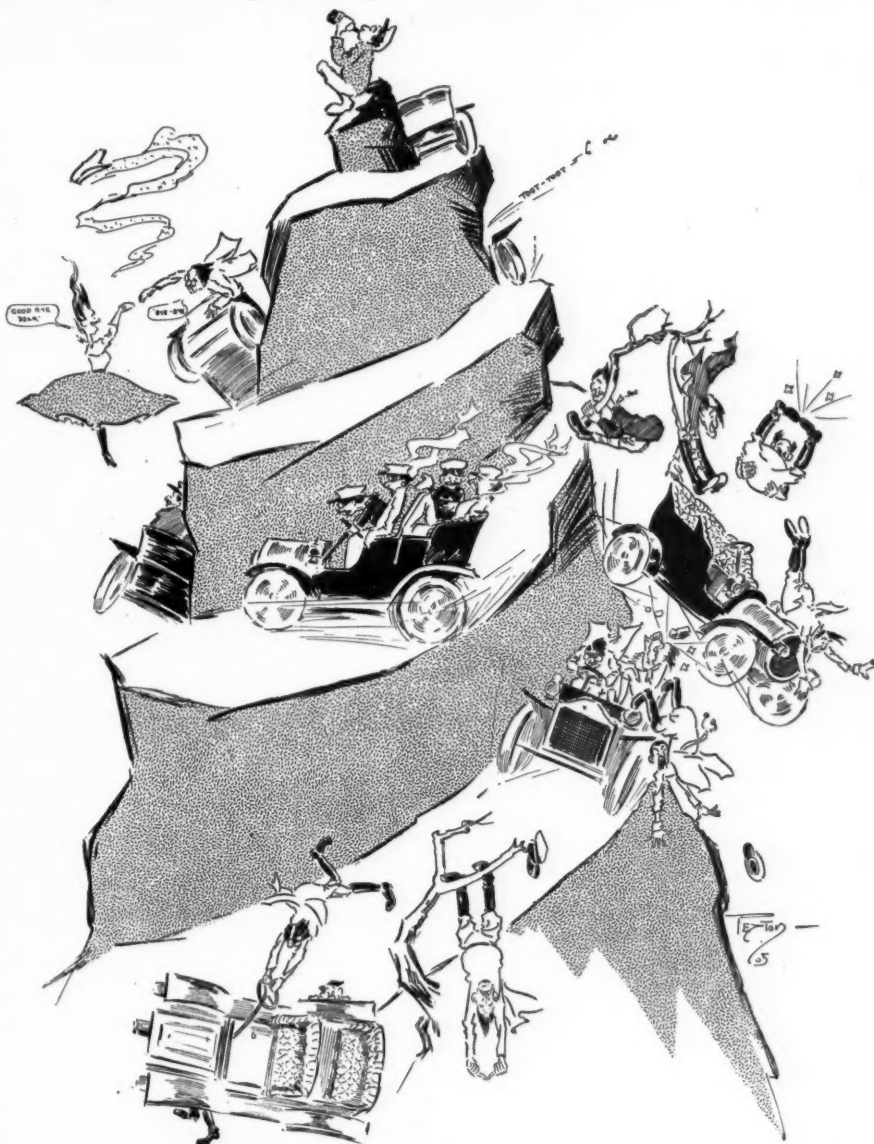
The French and German motor cyclists needn't crow over their reliability affairs. California has just held such a contest and out of the fourteen starters ten went the entire course with perfect scores, and the roads were vile at that.

If the weather happens to be good and hot about the time of the finish of the St.

Paul tour, the promoters and the entertainment committee will wish it had gone into partnership with Milwaukee in order to supply "entertainment" for the visiting motorists.

America and her roads are as much the laughing stock of the world as are Chicago and her labor disturbances the laughing stock of the nation. But good roads in this country will never come until some kind hearted manufacturer turns out an automobile to sell to the farmer for \$6.99. Then the farmer will buy and will want good roads. If the price can be made \$5.99 all the better.

The Jersey farmers are all worked up over the fact that the governor signed the automobile bill passed by the legislature, and now they propose to oppose any candidate who owns or is even interested in an automobile. Farmers are more or less alike the world over, and are naturally opposed to anything that is modern. It is their way, that's all, but pretty soon they will find it hard work to select a candidate at all if they stick to their decision.



THE WEEK

French manufacturers announce that they do not fear foreign competition in the motor car market.

De Dion-Bouton cars win first and second place in French reliability trials over 1,172-mile course.

Ten motor cyclists make perfect run in endurance run from Oakland to Del Monte and return.

Twin Cities announce racing program for Chicago-St. Paul rendezvous race meet.

American drivers in Bennett cup race find Auvergne circuit very difficult.

Thirteen out of twenty-four cars complete Austrian 510-mile reliability trial.

N. A. A. M. commences fight against automobiles carrying license tags.

Minneapolis holds biggest automobile parade of the west.

Colonel E. H. R. Green finds racing beach in Texas.

Milwaukee race meet with Oldfield as star.

Paris commences use of steam motor vans.

Wisconsin governor signs automobile bill.

MILWAUKEE WILD OVER BARNEY



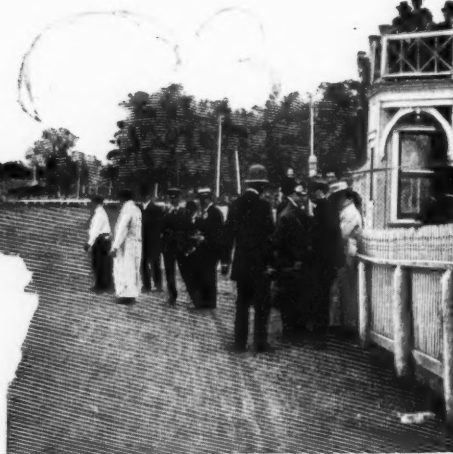
Milwaukee, Wis., June 3—Barney did it. He came and he conquered—we did the seeing. With his Green Dragon the illustrious Oldfield went a few for the delectation of the natives of Milwaukee. And with drooping chin and wide-staring eyes the natives looked on in amazement. It took them a whole day before they so far recovered their self-possession as to be able to cheer. And then cheer they did with a vim and vigor that did them credit. Barney got most of it, because he was the specially advertised feature of the performance. But there was enough and to spare for Charlie Soules, C. A. Coey, Dan Canary, Jerry Ellis and the rest of them.

It was a Barney meet, though. The sporting extras had Barney's name at the top of the page in letters 3 inches deep and pictures of him in his racing face that were startlingly suggestive of a certain character aptly portrayed by a man named Morrison in a play called Faust. And the second day the crowd was doubled.

Was it a success? Well, that depends. Nobody knows yet how far the promoters will have to go down in their pockets to make up the deficit. Was there a deficit? Can't say. If there was it's a cinch that the promoters will not be heard howling over it. At any rate it wasn't a frost. Nobody wanted his money back, and it awakened interest. And that's no easy task in Milwaukee, either. The circumstance that Milwaukee has so many automobiles and so many automobile concerns as it has is fit alone to rank among the pronounced wonders of the world. For Milwaukee's slow. Even her most patriotic citizen will admit that. But when she once gets there she sticks.

Conditions for the meet could not have been better. The man in the tower of the government building who is popularly supposed to dish out the weather had his choicest variety on top. There was not a cloud of any menacing proportions in evidence. The track at the state fair grounds was fast, a fact that was evidenced by Barney's pounding out a mile in 0:56 the first crack out of the box. And the state fair park course wasn't built for motor car races, either.

Milwaukee motorists welcomed the races heartily. Barney got here Wednesday night. Thursday he saw the town and the track. Other racers came Thursday and that evening there was a general round-up of the enthusiasts. With much tooting a motor car procession



passed through the streets to the amusement parks, where the driver-visitors were given a chance to drown whatever woes they might have brought with them from Chicago in flagons of the amber beverage which has helped to bestow fame upon Milwaukee. Forty machines were in the parade.

Friday morning there were workouts at the grounds, but the meet did not begin until afternoon. The crowd for the opening day was sparse, but interest was manifest among the faithful and many of them brought their friends Saturday. The first race of the meet was for five Cadillac cars, distance 3 miles. This developed a sensational finish right at the outset. August Jonas defeated William Jonas by scarcely 3 feet in 6:13%. The MOTOR AGE megaphone gathered the words from the lips of the announcer and sent them into the crowd. In a motor cycle race with four entries Walter Davidson won, doing 3 miles in 4:24%.

The third event was a 5-mile, open to 1-minute class cars. There were three entries, Charles Soules with the Pope-Toledo Red Rover, C. A. Coey with a Thomas and Dan Canary with his Thomas Tornado. Soules led from the start, with Canary from 100 to 150 yards behind him and Coey $\frac{3}{4}$ mile behind at the finish.

Arthur Gardner won the next event, a 3-mile open for Ramblers, in 5:43, with Harry Wade second. In the 3-mile race, open to cars listed at \$2,000 and under, J. H. McDuffee in a Stoddard-Dayton won in 4:57%, Henry Zerbel in a Merkel being second.

The sixth race proved to be a contest between two Pope-Toledos with an exciting finish. They were driven by Harry Nelson and Orlando Weber. The race was open to fully-equipped touring cars carrying three passengers. George Odenbrett in a Winton was fully a mile behind at the finish. Nelson led up to within a few yards of the finish when he was passed by Weber.

Joseph Merkel, with a Merkel and a big handicap, 2:30, won the next after C. A. Coey had passed him twice from scratch. The next race completed the day's program and brought out Oldfield. This was the Cream City sweepstakes, 5 miles. Oldfield won, with Charles Soules second and Dan Canary $\frac{1}{2}$ mile behind at the finish. Oldfield's last mile, knocked out amid lusty cheering, was done in 56 seconds. The time for the race was 4:58.

First day's summary:

Three-mile for Cadillacs—August Jonas, first; William Jonas, second; time, 6:13 2-5.

Five-mile, 1 minute class—Charles Soules, Pope-Toledo Red Rover, first; Dan Canary, Thomas Tornado, second; C. A. Coey, Thomas, third; time, 5:38 3-5.

Three-mile for Ramblers—Arthur Gardner, first; Harry Wade, second; Clyde Leppo, third; time, 5:43.

Three-mile for cars \$2,000 or under—J. H. McDuffee, Stoddard-Dayton, first; Henry Zerbel, Merkel, second; time, 4:57 2-5.

Five-mile for equipped touring cars—Orlando Weber, Pope-Toledo, first; George Odenbrett, Pope-Toledo, second; time, 8:45.

Five-mile handicap—Joseph Merkel, Merkel, 2:30 allowance, first; C. A. Coey, Thomas, scratch, second; time, 7:14.

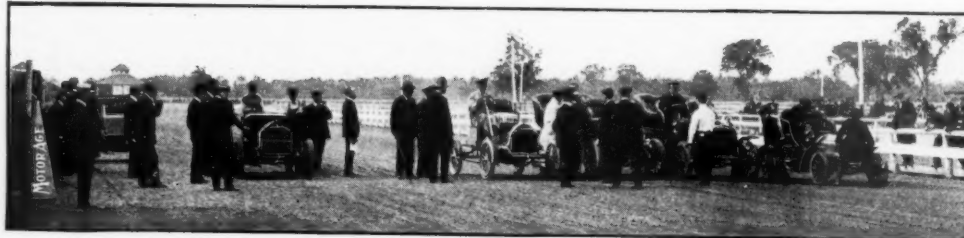
Five-mile Cream City sweepstakes—Barney Oldfield, Peerless Green Dragon, first; Charles Soules, Pope-Toledo Red Rover, second; Dan Canary, Thomas Tornado, third; time, 4:58; last mile, :56.

The next day it was still a Barney meet. The crowd had increased to between 4,000 and 5,000. That's a good crowd for automobile races in Milwaukee. It means about ten persons at the race to every machine owned in the city. And the people were waiting for Barney. They cheered the other fellows and took a lively interest in the exciting contest between Soules and Coey in the fourth event and cheered to the echo. But the real yelling was when the Green Dragon and its driver put in appearance. As on the day before Oldfield led from the start, but Soules was a close second. The time for the race was even better than on the day before—4:50 $\frac{1}{4}$ for the 5 miles. Oldfield's fastest mile was :56 $\frac{1}{2}$, just $\frac{1}{2}$ second slower than on Friday. Jerry Ellis, the third entry, was $\frac{1}{2}$ mile behind at the finish.

The second race was the special match between C. A. Coey in a Thomas and Jerry Ellis in an Apperson. Ellis led by 150 yards at the end of the first mile. Coey's engine got out of whack and a stop was necessitated. They got off again and once more Ellis led.

He won in 3:25%. The last mile was done in 1:07%. Coey won the second heat in 3:41. The finish was one of the closest of the meet, the machines being side by side.

Orlando and Charles Weber and



LINE UP OF THE RACE FOR \$2,000 CARS

Harry Nelson raced in Pope-Toledos. Charlie dropped out to fix his engine. Nelson quit and Orlando Weber finished the 3 miles in 4:17. Soules repeated his luck of the day before by winning the 5-mile 1-minute class race. His time was even better, 5:19%. Jerry Ellis, Dan Canary and C. A. Coey were the other entries. Ellis did not finish. In the event for Ramblers there were again three entered and Arthur Gardner won in 5:49. Three Wintons raced in the fifth and G. R. Bates won in 5:38%. One of George Odenbrett's drivers beat Dr. Ralph Elmergreen for second place. Joe McDuffe in a Stoddard-Dayton won the race for cars listed at \$2,000 and under, stripped, at 3 miles, in 4:47%. In the 5-mile handicap Jerry Ellis, scratch, won in his Apperson in 5:43%. Harry Zerbel was second. Orlando Weber in a Pope-Toledo, R. B. Ramien in a Franklin and Harry Nelson in a Pope-Toledo were the other starters.

Second day's summary:

Three-mile, motor cycles—Percy Mack, Davidson, first; Walter Davidson, Davidson, second; time, 3:58 1-5.

Three-mile, touring cars—Orlando Weber, Pope-Toledo, first; Charles Weber, Pope-Toledo, second; Harry Nelson, Pope-Toledo, third; time, 4:17.

Three-mile match, first heat—Jerry Ellis, Apperson, first; C. A. Coey, Thomas, second; time, 3:25 4-5.

Second heat—Coey, first; Ellis, second; time, 3:41 3-5.

Five-mile, 1 minute class—Charles Soules, Pope-Toledo Red Rover, first; Jerry Ellis, Apperson, second; Dan Canary, Thomas Tornado, third; time, 5:19 2-5.

Three-mile, special for Wintons—G. R. Gates, first; George Odenbrett, second; Dr. Elmergreen, third; time, 5:38.

Three-mile for Ramblers—Arthur Gardner, first; Clyde Leppo, second; time, 5:49.

Five-mile handicap—Jerry Ellis, Apperson, scratch, first; Harry Zerbel, Merkel, second; Orlando Weber, Pope-Toledo, third; time 5:43 1-5.

Three-mile for cars \$2,000 or under—J. H. McDuffe, Stoddard-Dayton, first; Joseph Merkel, Merkel, second; time, 4:47 2-5.

ST. PAUL TOUR DETAILS

St. Paul, Minn., June 5—From Chicago to St. Paul, 470 miles, in 36 hours, will be the feat attempted by the non-stop or manufacturers' section of the Chicago-St. Paul run. Announcement was made today that this section would be added to the big run, and would be timed so that the arrival will be simultaneous with that of the regular body of tourists.

The first cars will leave Chicago June 30, the section consisting of light cars. The larger cars will leave July 1. The arrival in St. Paul is timed for the afternoon of July 4. The non-stop section will consist of stock cars, and will leave the Chicago club early in the morning of July 3, and will attempt to reach St. Paul late the next day. A car built for five must carry five; a two-seat runabout will be allowed to travel with its two passengers; and the rules and regulations established for this part of the run will be strictly enforced.

The roads are in bad shape now, owing to the heavy rains, but are of such material that they will be in shape after a few days of pleasant weather. Across northern Illinois the roads are good; when the route strikes the Mississippi valley at Dubuque, sand is encountered, and the roads along the river are expected to be excellent. The roads through Iowa are of clay, and will be the best obtainable in fair weather. In Minneapolis the soil is a heavy loam, and the route up through the southern part of the state has been selected with a view to obtaining a practical turn-pike all the way.



SOCIETY WAS THERE

Oldfield, Chevrolet, Kiser, Jay, Canary, Christie, Johnson and Soles are tied up to contracts for the meet. To give the event its final touch the big racers who take part in the New York meet of July 4 will conduct a race across the country. A special train will be used by E. H. R. Green, Major Miller and Webb Jay to transport themselves and their machines from New York to St. Paul. The three men will appear in the New York events July 4. Their cars will be put upon the special, which will leave New York late on the afternoon of July 4. The racers expected to cover the 1,500 miles to St. Paul, so that the cars can be run out on the Hamline track fit for the races by noon of July 6.

The meet will occupy the afternoons of Thursday and Saturday, July 6 and 8. It was announced that the railroads have practically agreed to a low rate from Chicago. The race program for the meet follows:

THURSDAY, JULY 6.

One-mile, flying start, against world's circular track record.

Three-mile novelty, for fully equipped touring cars.

Dual club event, for Twin City challenge cup—

competitors to be members of St. Paul or Minneapolis clubs; owners to drive.

Five-mile club championship between representatives of New York, Chicago and St. Paul clubs.

Five-mile handicap for cars taking part in run, owners to drive.

Manufacturers' and dealers' race, silver trophy—stripped stock cars.

Five-mile open, preliminary heats for class B cars; weight limited to 1,432; prizes, \$500, \$300, \$200.

Two-mile open, for amateurs.

Match race, two steam cars making best time to meet, winner to race against winner of match race between two fastest gasoline cars.

Invitation race, preliminary heats, three prizes.

Open race, preliminary heats; prizes, \$1,500, \$750, \$250.

SATURDAY, JULY 8.

Two-mile flying start, against world's circular track record.

Two miles novelty, women with escorts to drive.

Minle open, for Minnesota cars; record made to stand as official.

Five-mile cup championship, final, New York, Chicago and St. Paul clubs.

Five-mile handicap, for touring cars, driven by owners, three passengers.

Five-mile open, class B cars, final heat.

Manufacturers and dealers' race, stripped stock cars.

Five-mile open for amateurs, final.

Final heat, \$2,500 open race.

Final heat, \$1,000 invitation race.

Two-mile open race for cars under 1,432 pounds, owners to enter and drive.

Five-mile open handicap pursuit race.

Match race for \$500; four cars making best time in previous races to be selected.

AMERICANS IN PARIS

Paris, France, May 27—The American Bennett cup race drivers, H. H. Lyttle and J. H. Dingley, arrived in Paris a few days ago, while the Pope-Toledo racers were shipped directly to Clermont-Ferrand from Havre. The Auvergne course is considered by the Americans as very difficult. They do not think it will be possible to run cars at a great rate of speed and believe their 50-horsepower American cars have fully as much chance to win as any others, besides having the advantage of being lighter and shorter than many of the European cars. They say the race will be a test of driving rather than one of horsepower.

The recent decision of the minister of the interior to prevent training on the circuit until after the eliminating race, has caused disappointment even among the drivers who have been over the circuit many times. A petition may be sent to the minister asking that certain days be set apart for the purpose. Several American tire repairmen are expected in Paris, having been sent abroad by a concern in Akron, O., to take care of the tires on the American racing cars.



CARS OF ALL STYLES LINED THE INFIELD

FEAR FOREIGN MAKERS

French Manufacturers Stirred Up Over Importation Figures and Want Higher Tariff

Paris, France, May 26—When the most influential daily papers in England started to advise the Britishers to buy British-made automobiles, the French publications paid little attention to the matter more than to urge British manufacturers to try to make as good automobiles as are made in France. A few days ago much surprise was caused by the appearance in *l'Auto* of a letter addressed to the French manufacturers by Editor Desgranges, who takes a more serious view of the affair. Desgranges refers to the campaign of English papers, the large orders given to German or Belgian concerns for omnibuses, the great extension of the automobile passenger service in Germany and England, the remarkable progress made in the United States in the production of small cars at moderate prices, and asks the manufacturers to give their advice as to what should be done to overcome these important developments.

Several important concerns have already replied, some suggesting more reliability trials, but with entirely different regulations than those now applied, while others claim there is no need of getting frightened, as it will be a long time before the manufacturers will have supplied all the cars needed in France. The manufacturer of the Aries cars believes the best way to stimulate the manufacture of commercial cars and small cars is to promote contests, of which there should be not more than one or two each year, but on a greater scale and under entirely different regulations than now in vogue. The classification, he thought, ought to be made so as to avoid possible discussion or doubt. For touring cars there should be a unique classification, the cylinder capacity being preferred, and for commercial cars the weight of the load carried. In general these competitions should be studied and arranged more thoroughly and carefully.

"We need not be afraid of foreign competition," said Emil Mors, the manufacturer of the Mors car. "Now, and for a long time to come, foreigners are our tributaries and for cars of more than 10 horse-power there is no foreign invasion in sight. Furthermore after duty and transportation charges have been added the foreign cars cannot compete with French machines. It is different with small cars. The manufacturing methods in the United States are entirely different from ours and the Americans are able to build very cheaply and in large quantities. I know of a concern that builds 6,000 cars a year, and as the prospective customer of a cheap automobile generally buys the cheapest machine, you can easily deduct a conclusion. The car is possibly not built too strong, but it holds up a year. As for commercial cars, the French manufacturers have at present more orders than they can fill and for this reason we are not worried about this trade. When we really start to make them we will be able to take the first position as manufacturers of commercial cars, as we have in the manufacture of touring cars."

M. Charron, of Charron, Girardot & Voight, thinks the reason French manufacturers do not get orders for commercial cars is because their prices are high and because they cannot make deliveries. At the same time, Charron

points out that manufacturing expenses are much higher in France and that manufacturers prefer to make ordinary chassis of an average price of \$2,000 than commercial vehicles which require even more work and more material. As for small cars, they are generally bought by doctors, lawyers and traveling men who often have only small means. There is not enough profit in these cars. In short, Charron thinks that the French manufacturers have plenty to do to meet the home trade for many years to come.

L. Rene, a French manufacturer of volt-meters, but located in London, and who has acted as an intermediary between British concerns wanting commercial cars and French automobile manufacturers, says the French concerns do not take enough interest in commercial cars.

M. Berliet, manufacturer of the Berliet cars, says the rules and regulations of French touring events are such that the event generally becomes a road race. Instead of only taking into consideration the average speed in such trials, there ought to be a time limit set for the arrival of cars at each control and in case a car arrives there ahead of time it should be penalized. Furthermore the contestants should not know where the controls are established, as in that way they would be more apt to conform to the regulations and not indulge in racing. In competitions for touring cars, Berliet thinks the regulations should be made more strict, especially as to the cylinder capacity, fuel consumption and speed. He also says it is to be regretted that there are too many speed contests, which are of no use to anybody and take up the time of the men in factories and prevent the study of the commercial cars. "As far as we are concerned," says Berliet, "we are studying the commercial vehicle problem, but will not put any on the market until they have been fully tested and found satisfactory."

Brasier, of the Richard-Brasier concern, thinks the best way to meet foreign competition would be for the manufacturers to consider themselves more as fellow members instead of competitors, and for the trade papers and other journals to do less knocking and more work of general interest and more boosting of French cars than of foreign-made automobiles, notwithstanding the advertising end of the matter.

M. Cottureau is of the opinion that by doing the best and by letting the foreigners say what they want, it will prove one of the best methods of meeting foreign competition. The French manufacturers will find plenty of markets in their own country and will be able to further develop the automobile.

FRENCH TRIALS POSTPONED

Paris, France, May 26—Owing to the fact that many regiments stationed in the province of Seine-et-Oise are to be sent to Paris, during the stay in the capital of the king of Spain, the governor of the province informed the Motorcycle Club of France that there would not be sufficient troops available on June 4 to securely guard the circuit upon which the French motor cycle eliminating race is to be run and consequently the race was postponed until June 11. The cup race will be run June 25, as originally decided. The French team in that event will wear black, the German team white, the British team green, and the Austrian team blue. Great interest is shown in the race.

ONLY SIX CARS COMPLETE

Reliability Trials in France Successful Except in the Number of Machines Entered

Paris, France, May 25—The much-advertised reliability trial organized by the Automobile Club du Cantre, the Motorcycle Club of France and the business men's committee of the province of Loiret has been run, and while it was a failure as far as the number of contestants is concerned, it was the longest and most difficult reliability trial ever held in France, the distance which the competitors had to cover being nearly 1,172 miles.

The winner was the 10-horsepower de Dion-Bouton car, driven by Cormier, which scored 4,798 points. The 8-horsepower de Dion-Bouton, driven by Montariol, was awarded second prize, having scored 4,744 points. The 16-horsepower Boyer, driven by Loste, was third, and the 16-horsepower Trunel, driven by Couverchel, was fourth. The 30-horsepower Aries, driven by Coquard, and the 20-horsepower Berliet, driven by Guyot, dropped out of the trials during the last day. Both of the two motorcycles which competed finished in excellent condition, and the Loiret cup was awarded to the Griffon, ridden by Armbruster, while the Poitevine, a home made motorcycle, driven by its maker, Landry, received the gold medal.

About two score cars had entered for this long competition, but only six of them and the two motorcycles started. During 8 days the contestants had to cover an average of from 124½ to 199 miles daily, there being a morning and an afternoon run each day. The start was made from Orleans every day and the return made the same night. Every day a different route was followed. The only classification that was made among cars was according to price. In the first class cars costing less than \$1,000 were entered. In the second class were the cars costing from \$1,000 to \$1,600; in the third those of from \$1,600 to \$2,400; in the fourth cars costing from \$2,400 to \$3,200, and in the fifth cars of a higher price. The classification was made as follows: Two hundred points were allowed for each of the two daily runs for the regularity of traveling; for speed upon hills, 100 points were allowed, and any car which was able to climb a certain distance upon a hill at the rate of 18¼ miles an hour was given the total number of points.

Fifty points were given for quickness in getting the motor started. The maximum points were awarded if the starting was done in 15 seconds or less, while two points were lost for each five seconds longer required to get the motor started. For comfort and elegance of cars and their protection against mud, dust and rain 400 points were allowed. For the ease of operating brakes, 399 points were allowed. For ease of access to the motor, carbureter, transmission and lubricating apparatus, 200 points were allowed. For anti-shock device 100 points; for ease of operating the car and absence of noise when reversing speed, 100 points. For the absence of vibration when the car is not running, fifty points; for the absence of smoke, fifty points; for ease of changing from forward to reverse speed, fifty points; for good location of the exhaust valves, fifty points; for the best assortment of exchange parts, 100 points; for the price of the car with full touring equipment, 200 points.

For each of the two daily trips the con-

testants were allowed a certain time within which they had to cover the run. In case of a late or too early arrival at the garage three points were deducted for every 5 minutes late arrival or too early arrival.

Near Fontainebleau on the fourth day a hill-climbing contest was held, the distance being 1 kilometer. The 30-horsepower Aries climbed a hill in 2:35%, followed 5 seconds later by the 16-horsepower Pruneo, while the 10-horsepower de Dion was third. On the fifth day there was a competition for starting motors, in which the 16-horsepower Boyer made a remarkable performance, being able to get its motor started in $\frac{1}{4}$ second. The 6-horsepower de Dion-Bouton was second, being started in $2\frac{1}{2}$ %, and the 30-horsepower Aries was started in 20 seconds. The only car which had not lost a single point up to the morning of the sixth day was the 10-horsepower de Dion-Bouton. It had then covered 714 miles. Soon after leaving Vierson on the second run of the day ignition trouble caused the car to lose its first point.

All told this reliability trial is considered by many as the most effective contest which has ever been organized in France for motor cars and motorcycles. Many manufacturers had expressed the intention of waiting to see the outcome of this trial in order to decide whether they would participate in similar events in the future. The excellent record made by the de Dion-Bouton cars has induced the concern making them to enter several of the important endurance runs and reliability trials which are being organized in various continental countries. It is even rumored that the de Dion-Bouton cars will be sent to the United States to compete in such events.

NEW CAR FOR BALD

Hartford, Conn., June 5—While the entries for the automobile races at Charter Oak park meeting June 16 and 17 do not close until June 14, it can be told at this time that the fluke of last season will not be repeated. In fact, indications point to a particularly successful meeting and some of the cracks of the country will participate. Bald will emerge on that day with a new car. The new boat, which is known in the Electric Vehicle Co.'s factory, where it is making in the model room, as the Yellow Peril, contains one of the Columbia 40-horsepower motors, installed in a very lightweight frame. The wheels, tires and transmission are all special and Bald believes the car will be fast.

The 20-hour race promises to be the hardest kind of a grind and there will be plenty of entries, more possibly than desired, and the committee may feel it necessary to limit the number. Fred Law will enter the Law car and will probably drive it himself. The Knox people will come down with a flock of cars for this and the other events and the Electric Vehicle Co. is to put a whole fleet of cars in this contest. There will likely be three of the 40-horsepower cars and three of the 20-horsepower two-cylinder cars. The big cars will be driven probably by Larry Duffie, George Le Forest Lull and Gene Martens. In the class for Corinthian drivers J. Howard Morse will likely drive his new 50-horsepower Thomas Flyer. Manager Gillette hopes to get George Cannou and Webb Jay together in steamers. The club is trying to draw Colonel Pope and Harry W. Kyte into a match race and Kyte professes to be willing. The meet promises to be the best ever held in Hartford.

AUSTRIAN TRIALS CLOSE

Fourteen Out of Twenty-Four Starters Finish 510-Mile Run—Two American Cars Score

Vienna, Austria, May 24—After traveling 510 miles over some of the worst Austrian and German roads fourteen out of twenty-four of the starters in the Vienna-Breslau-Vienna reliability trial, promoted by the Automobile Club of Austria, returned to the starting place in perfect condition. It was the longest automobile competition ever held in that part of Europe, and although the number of entries was far from what had been anticipated, the fact that cars from France, Germany, Austria and the United States entered made the event international. The cars were divided into four classes; in the first class were single-cylinder vehicles; in the second were two-cylinder cars; in the third were four-cylinder cars up to 24 horsepower, and in the fourth there were four-cylinder cars of more than 24 horsepower. The starters comprised three German, eight Austrian, six French and two American cars.

The two American cars, both of which were 7-horsepower Oldsmobiles, finished among the first; seven German, three Austrian and two French cars also completed the entire trip. On the first day the cars ran from Vienna to Olmutz, a distance of 128 miles. The small cars started at 5 in the morning at interval of 2 minutes, while cars of the third and fourth class were started at 3-minute intervals. About 8 miles from Vienna, near Gross Jedlersdorf, a speed contest over a distance of 1 kilometer was held. The best time was made by the 70-horsepower Lohner-Porsche car, which covered the distance, from a standing start, in 55 seconds. In the first class the Oldsmobile made the best time, 1:35; in the second class the 14-horsepower Bock & Hollender won first prize by covering the distance in 1:29. A 24-horsepower Mercedes and a 24-horsepower Spitz ran a dead-heat in the third class, each car running the kilometer in 1:12 $\frac{1}{2}$.

On the second day a hill-climbing contest was run near Sternberg, a few miles from Olmutz. The distance to be covered was $2\frac{1}{2}$ miles, with an average grade of 10 per cent. The fastest climb was that of the Oldsmobile in the first class, the time being 9:42; the Bock & Hollender in the second class, time being 9:09 $\frac{1}{2}$; the 24-horsepower Mercedes in the third class, the time being 5:20, and the 60-horsepower Mercedes in the fourth class, the time being 4:57.

The roads chosen for the endurance run were in many instances only passable. In some cases many little streams had to be forded almost continually for hours. One of the contestants claimed he counted more than 200 such streams on the way to Breslau. The country traversed was interesting in the way of scenery, but no great enthusiasm was shown by the farmers; in fact, in some instances, the motorists had a great deal of trouble in passing on certain roads. The promoters of the contest chose to have the cars go over roads upon which automobiles has never before been driven, and which were especially used by the farmers. This resulted in many teams being frightened and many narrow accidents being avoided. Instead of having promoted good feeling among the farmers there is now a great deal of irritation against the automobilists.

One of the features of this reliability trial is the excellent showing made by an old 6-horsepower Panhard car, which went all through the hard contest without losing any more points than some of the latest French and German cars of a much greater power. Owing to a delay caused by tire trouble when about 10 miles from Vienna on the return journey the old Panhard arrived too late at the control to enable it to be classified.

The fourteen cars which completed the run are: Two 7-horsepower Oldsmobiles, one 6-horsepower baby Peugeot, one 8-horsepower Opel-Darracq, one 10-horsepower Peugeot, two 24-horsepower Mercedes, one 18-horsepower Durkopp, one 28-horsepower Mercedes, one 16 and one 35-horsepower Bock & Hollender, one 40 and one 60-horsepower Mercedes and one 24-horsepower Spitz. It is likely that another endurance run will be arranged for the end of August, and it is expected that many more members of the automobile club of Austria will take part in it.

KING HORSE LAID LOW

Philadelphia, June 5—It used to be—and not so many years ago, either—that the appearance of an automobile at the annual horse show at Wissahickon Heights was commented upon as a sort of desecration, an attempt to share in the triumphs of King Horse. The real people—the 400—even if they did own automobiles, were careful, during the week devoted to the equine, to carefully keep their motor cars under cover and travel to and from St. Martin's Green in four-in-hands, dog carts, brakes and other horse-drawn vehicles upon which Dame Fashion may have set the seal of her approval.

Last week witnessed a general and spontaneous reversal of form in this respect. It may have been due to the fact that Reggy and Al Vanderbilt and other of the elect not only drove over from New York in their cars, but used them constantly in their trips to and from the horse show and round about town—at any rate, the appearance of the grounds outside the show ring much more resembled the gathering at an automobile race meet than an exhibition of horse-flesh. Indeed, except on the tanbark the horses seemed out of place. Outside that charmed circle the automobiles outnumbered and outshone the horse-drawn rigs.

Local garages did a big business in caring for the cars of out-of-towners, and the daily crush of motor cars at the entrances of the Bellevue-Stratford before and after the show made that already-famed hostelry look like the stopping place of a huge touring party.

The horse may be a thing of beauty, all right—something fine to look upon and to capture blue ribbons with—but when it comes to getting over the ground smoothly, safely and swiftly the motor car seems to have something on the equine. The people who can afford both demonstrated that to the satisfaction of everybody at the horse show.

DISCUSSED CARBURETERS

New York, June 5—Seventeen engineers, representing prominent manufacturers connected with the A. L. A. M., met at the association's office on Friday to discuss various problems of automobile development. It was the second monthly meeting of the mechanical branch. Carbureters were the subject of discussion. It was voted to have carbureters for the subject of the next meeting, on July 7.

MINNEAPOLIS' BIG PARADE



WAITING FOR THE PARADE TO START

Minneapolis, June 3—Perfect weather, perfect arrangements and plenty of enthusiasm and interest made the second annual parade of the Minneapolis Automobile Club and the Minneapolis Retail Automobile Dealers' Association a success in the fullest meaning of the word. Over 275 cars took part in the parade, which moved down the principal streets of the city amid crowds of interested and enthusiastic spectators. The number of cars in line exceeded the turnout of a year ago by nearly 150, and the majority of the machines were 1905 models. Makes of all kinds and machines of all powers were in the procession, from 5-horsepower runabouts to 40-horsepower touring cars.

The line of machines was over 2 miles long. It was led by the big Pillsbury flour truck. Into this moving warehouse were loaded twenty-five members of the newsboys' band. Chief of Police Doyle preceded the column in an electric carriage, and the band cars were followed by a string of electric stanhopes, coupes and victorias, in which were Mayor David P. Jones, Secretary Ralph W. Wheelock, and other dignitaries. The cars were arranged according to size, and the procession of 24-horsepower and 35-horsepower touring cars which filed by amazed the simple and law-abiding citizens of Minneapolis, who had never before realized the magnitude of the automobile sales in the city.

The foremost line of cars contained a long string of 24-horsepower Pope-Toledos, of all shapes and colors, and these were followed by the best of the Peerless products, Wintons of new and old pattern, Locomobiles, Pierce Great Arrow, Royal Tourists, Nationals, Columbias and a Mercedes. The lighter cars of medium horsepower, such as the Rambler, Franklin and Cadillac, were there in great numbers. The Cadillacs were a particularly numerous family, official count showing thirty-nine of them in line. Ramblers were even more numerous, thirty-eight touring cars being in the procession, and four or five runabouts.

The most striking display of the entire parade was undoubtedly that of the White steamers. Exactly twenty were in the section reserved for them. Another turnout of interest was that of Maxwell cars. Nearly a dozen of these machines were in line. The 40-horsepower Locomobile of Winston & Walker, and the 35-horsepower Columbia of

Phil Brooks were the two most powerful cars in the parade. The Knox family was well represented, as was the Elmore tribe, the Thomas, Haynes-Apperson and Oldsmobile. The Ford line was also a long one, many of the new Ford touring cars being in the procession.

The line of march was from the formation on Park avenue down Third avenue south to Washington, over to Nicollet, and up Nicollet to Twelfth street. There the parade doubled back, so that the occupants of each car could review the procession. A press car was furnished by Winston & Walker, and carried representatives of the daily papers. The big turnout in the parade has done much to arouse automobile interest in the city. J. S. Spargo, who was the practical manager of the affair, is receiving the chief credit for the success of the parade, and for its careful arrangement.

BIG PERCENTAGE SCORE

San Francisco, June 1—The San Francisco Motorcycle Club surpassed itself in its first endurance run over a considerable distance. The initial annual reliability test was held Sunday from Oakland to Del Monte and return. The club promoted several reliability contests of 100 miles last season, all of which were successful. The event yesterday, however, was the most important ever held on the coast, in fact, previous endurance tests appear mere runs by comparison. Ten motor cyclists, tired, dusty and sleepy but still enthusiastic, arrived at Larkin and McAllister streets last night after having covered 256 miles to Monterey and return.

Seventeen riders started yesterday morning at 3:30 o'clock from Oakland. Of these, ten finished at 8:30 o'clock last night with a perfect score of 100 points. The other seven riders were either disabled or compelled to retire. The scheduled time to arrive at Del Monte was 11:05 and thirteen riders had perfect scores to this point. Of these Harry Anthony, F. H. Pugh and J. M. Litchfield failed to reach this city on schedule. Litchfield met with a rather serious accident on the return trip and nearly met death. On the steep San Juan grade he was going at the rate of 25 miles an hour, when the fork of his machine broke and he was thrown headlong over an embankment. He was picked up bleeding and unconscious, but luckily no bones were broken.

Thomas A. White met with an accident at

Centerville on the run down. The forks of his machine broke and he was thrown heavily, suffering a sprained wrist. O. F. Dennis dropped out of the contest near Salmas on account of illness. W. H. Husted got as far as Morgan hill and then decided not to go further.

The officials were rather generous with their time allowance for the long run. The contest made it plain that motor cyclists can cover the distance of 256 miles to Del Monte in much faster time. Most of those who finished with perfect scores arrived on the outskirts of the city more than an hour ahead of time, but under the conditions of the contest were compelled to wait till the exact minute before they put in an appearance at the finish.

All kinds of hardships were encountered. Despite the fact that some who finished without discredits declared the task laid out for them was not at all difficult, the contest not only tested the mettle of the men but that of the machines. All those who finished the 256 miles were awarded gold bars carrying a medal.

The riders reported the roads in fairly good condition on the run down. On the return trip the going from San Jose to San Francisco on this side of the bay was rather rough. Part of the time it rained making the road heavy and slow, and in some places the contestants were compelled to ride through water to the cranks of their machine. Near the San Juan hill, where Litchfield met with the accident, the roads were rough and it was hard riding. The men traveled to Del Monte by way of Centerville, Niles and Haywards and returned through Palo Alto and over the Bay shore road.

The affair was held under the rules and with the sanctions of the Federation of American Motocyclists. E. L. Malsbary refereed the contest, W. C. Clark was judge and timer at the start, H. B. Brough timer at Del Monte and L. H. Bill judge at finish. The summary:

Contestant.	Machine.	Ar. Del Monte.	Ar. S. F.
H. G. Corbaley..	Indian	.....11:06	8:30
F. A. Genung....	Duck	.....11:06	8:30
M. Fink	Yale-Cal.	.....11:06½	8:30
L. B. Smith.....	Indian	.....11:06½	8:30
J. M. Litchfield..	Indian	.....11:03	....
C. C. Hopkins...	Indian	.....11:03	8:30
F. E. Karslake...	Duck	.....11:03	8:30
J. H. Nash	Indian	.....11:04	8:30
H. Anthony	Yale-Cal.	.....11:05	....
F. H. Puck.....	Yale-Cal.	.....11:05	....
C. A. Bowman...	Indian	.....11:05	8:30
D. Wilkie	Duck	.....12:25	....
F. E. Carroll....	Indian	.....11:05	8:30
J. H. Fry.....	Reading Stand.	11:05	8:30

INDUSTRY IN MICHIGAN

Washington, D. C., June 3—The census bureau has just made public the results of the first 5-year census of the manufactures of Michigan. Considerable space in the Michigan report is devoted to the automobile industry. Lansing claims the distinction of producing more automobiles than any other city of its size in the world. The largest factories are located in Detroit, Lansing and Grand Rapids in the order named. Several large factories have recently been completed and are now in operation. Competent local authorities state that the output from the factories in Detroit and Lansing will be more than doubled within the 12 months immediately following the publication of this report. In 1904 there were twenty-two automobile manufacturing establishments in Michigan, with a total capacity of \$3,765,240, of which \$173,977 was in land, \$361,634 in buildings, \$544,560 in machinery, tools and implements, and \$2,685,069 in cash and sun-

dries. The average number of wage earners in that year was 2,123 and they received in wages the sum of \$970,895. All the wage earners with one exception were men. Miscellaneous expenses in 1904 totaled \$1,423,167, of which \$12,805 was for rent, \$9,365 for taxes, \$370,035 for rent of offices, interest, etc., and \$1,030,962 for contract work. The cost of the materials used in 1904 was \$2,872,655, the major portion of which \$2,848,148 was for principal materials, including mill supplies and freight, while the remainder, \$24,507 was for fuel and rent of power and heat. The total value of the product in 1904 was \$6,876,708.

Detroit has twelve manufacturing establishments and employs \$2,982,949 capital. In these twelve establishments last year 1,564 wage earners were employed and they received in wages the sum of \$733,012. Detroit's automobile factories last year expended \$1,278,160 for miscellaneous expenses, \$2,199,277 for materials used, and produced a product valued at \$5,382,212. Kalamazoo reported three automobile manufacturing plants, with a total capital of \$96,471 and a product valued at \$72,959. Lansing reported three establishments with a total capital of \$507,580 and a product valued at \$1,237,379. Grand Rapids and Jackson each reported one establishment, the details of which were classified under the head of "all other industries" in order not to divulge the capital, value of product, wages, etc.

The report further shows that there are eleven establishments in the state devoted to the manufacture of automobile bodies and parts with a total capital of \$381,627. In this branch of the business 612 wage earners were employed last year, \$55,823 was expended in miscellaneous expenses, \$570,397 for the purchase of materials, while the value of the product last year was \$1,119,826.

WHITMAN AFTER RECORD

Pasadena, Cal., June 1.—L. L. Whitman, the transcontinental record breaker and holder who drove from San Francisco to New York over some of the worst roads in America in 33 days in a Franklin runabout, is about to start on another record-breaking run. In a few days he will start from Los Angeles, with R. C. Hamlin, and try and establish a new record between that city and San Francisco. The distance between the two towns is 500 miles, and the best time known to have been made by an automobile is credited to a Packard, which covered the 500 miles in 54 hours. Half of the distance is through mountainous country and in many sections the roads are in bad condition. In order to have the time made become an official mark, the attempt will be made under automobile and newspaper control, and observers will be placed in Santa Barbara, San Luis Obispo, San Jose, Salinas and at the Automobile Club of California in San Francisco.

MASSACHUSETTS HAS 6 000

Boston, Mass., June 5—A fact indicating the greatly increased interest in automobiling in this state is that during the first 15 days of April the Massachusetts highway commission received \$2,086 for automobile registration and operators' licenses. The number of machines registered up to that date since the inauguration of the system of registration was slightly over 8,000.

ORPHANS GO FOR RIDE

New York and Pittsburg Motorists Pack Cars and Take Unfortun- ates for Day's Outing

New York, June 7—Special telegram—Despite lowering clouds and threatening weather, Senator Morgan's orphans' day idea had a successful inauguration at the hands of the New York Motor Club. The children of nine orphan asylums, numbering close to a thousand, were carried in 135 cars of various types from the big passenger bus to the tiny runabout, contributed by members, tradesmen, and owners generally. Many of the cars were packed to their utmost capacity to meet the demand.

The various divisions assembled on Broadway, near Columbus circle, and in the adjacent side streets. The run started at 11:30 o'clock and proceeded down Broadway, where it was reviewed by Mayor McClellan, thence across Brooklyn bridge, through Prospect park and down the Ocean parkway to Coney Island and within the gates of Dreamland. Here the children first of all lunched in the big dining hall on the pier, then made the round of the various amusements as the guests of the Dreamland managers. At 4:30 o'clock they started for home, delirious with joy over their first automobile ride.

The details were in charge of S. A. Miles and were carried out without a hitch. Each owner was directed at what institution to report and was there met by a member of the club, who attended to the loading of the cars. Each institution had its distinctive color. Its children wore arm bands and the cars bore numbers of that color. Each attendant looked after two carloads of children and an emergency relief corps with attending physicians followed the run.

Pittsburg, June 7—Special telegram—Over seventy members of the Automobile Club of Pittsburg lent their automobiles to the orphans of the city. The day dawned cloudy, but cleared up before noon and was cool and breezy. Motorists went to the institutions at 9 o'clock and collected 400 children. The parade was in two sections, one from Pittsburg and the other from Allegheny. Each asylum had its colors and pennants and the children carried flags. The Allegheny section went along the ridge and Marion avenues, Ohio and Federal streets to Pennsylvania avenue, Pitts-

burg, and to Liberty avenue, Seventh avenue, Grant boulevard and Bellefield avenue. Here the Pittsburg section joined it and both went to Schenley park, along Beechwood boulevard to Highland park and returned via Luna park, where the children saw wonders and had luncheon, returning at 4 o'clock. The institutions represented were the St. Joseph's, thirty-six cars, 200 orphans; United Presbyterian, eight cars, forty-five children; Memorial Home for Crippled Children, twenty-two children, eight cars; Curtis Home, two cars, eleven orphans; Pittsburg and Allegheny Protestant Orphans' Home, 100 children.

ASSISTS ROAD WORK

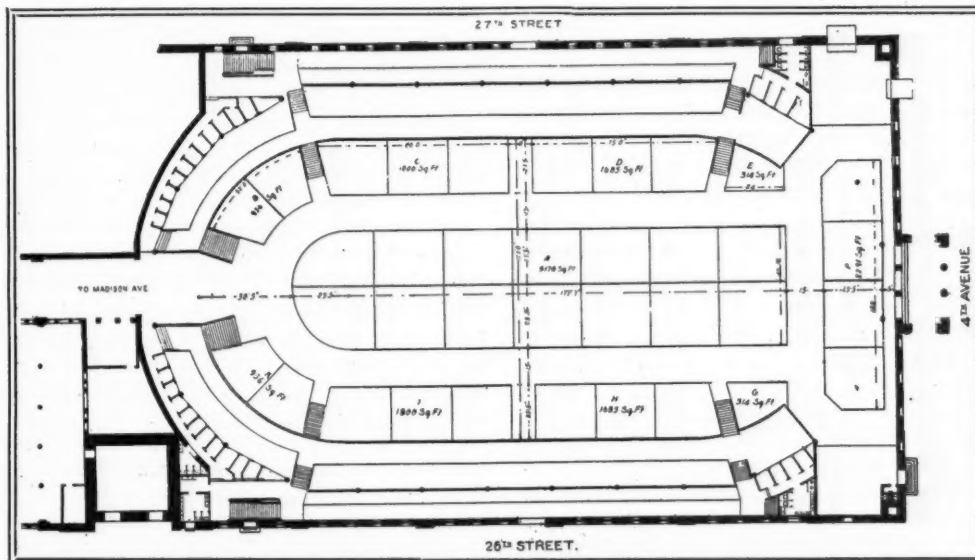
New York, June 7—Special telegram—At its meeting yesterday afternoon the executive committee of the National Association of Automobile Manufacturers made an appropriation of \$500 to assist in the work of the New York-Chicago Highway Association. It was reported that during the morning a formal arrest had been made in Jersey City for the purpose of testing the constitutionality of the license law. The question of local shows was discussed at considerable length and eventually referred to the show committee, with power to act.

GARDEN PLANS MADE

New York, June 3.—Plans are out for the arrangement of the spaces at the A. L. A. M. show. The plan of the main floor is radically different from that of former shows. In place of the three aisles of 9 feet each of the 1905 show is a promenade around them 15 feet in width. There are 38 main floor spaces. All of them are of uniform depth. Spaces B, C and D have been assigned to the licensed importers. The allotment of the remaining spaces on the main floor of the garden to members of the A. L. A. M. is to be determined.

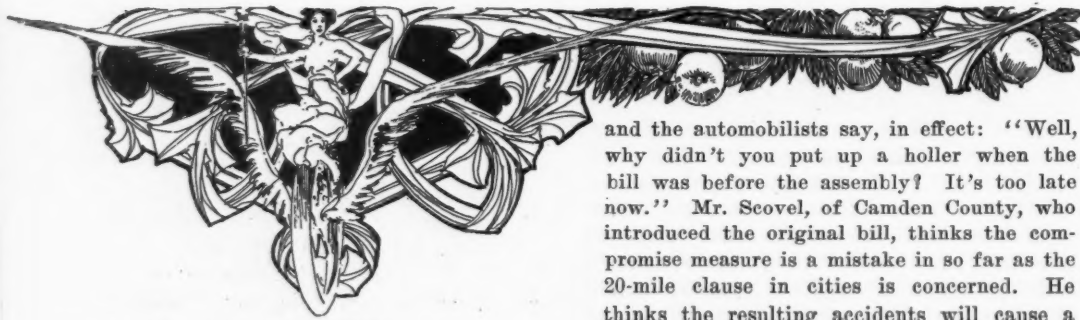
BIG RACE PROBABLE

New York, June 7—Special telegram—There is a strong chance that Henry Ford and his Ormond racer will meet Chevrolet and Major Miller's Fiat in the first race for the national championship at the opening national circuit meet at Morris park next Saturday. Among the other notable entrants are the Decauville Redbird, new Cameron, and Major Miller's Renault. The Thomas Locomobile, candidate for the Bennett cup race, will be shipped tomorrow. A. L. Riker will sail tomorrow also.



GROUND PLAN OF L. A. A. M. SHOW IN MADISON SQUARE GARDEN NEXT JANUARY

LEGAL SENSE AND NONSENSE



WISCONSIN'S NEW LAW

The new automobile law of the state of Wisconsin, which had been passed by both the house and senate, as expected, was signed by the governor this week. It provides that motor cars must be registered and numbered. The registration fee is \$1 and for the number plate 50 cents is charged. The letter W will appear in the number plate. Manufacturers and dealers upon payment of a fee of \$5 will receive a general distinguishing mark or number in quadruplicate. These special marks must not be put upon the cars used by the manufacturer or dealer for his own private use. Additional duplicate numbers may be procured by the manufacturer at an extra fee of \$1. In cities or villages the maximum speed permitted is 12 miles an hour; outside of the city or village limits cars may be driven at 25 miles an hour, and at street crossings, curves and other places of danger the motorist must slow down in order to avoid accidents. Upon being signaled by the driver of a team, an automobile driver must stop and wait before again starting until the horse or horses are under control. If requested, the motorist is to help the team driver. No discrimination is to be made between automobile drivers or drivers of any other kind of vehicles, in the use of the roads. No one may signal to a motorist to stop without due cause. Motorists from other states traveling in Wisconsin do not have to comply with the registration and numbering provisions, provided they have complied with the regulations in force in their state. Violations of the law will be punished with fines of from \$10 to \$50. Cities, towns, villages, park boards or any other authorities must not pass automobile ordinances and the new law will make void existing local ordinances. In reference to this law it must be said that the credit of its passing is due almost entirely to the efforts made by Attorney James T. Drought, who is secretary of the Milwaukee Automobile Club. There were three bills presented to the legislature and there was a great deal of opposition even after the bill presented had been amended in several respects, but the Milwaukee lawyer succeeded in having the important measure pass.

HOW JERSEY'S LAW WORKS

After a trial of but 1 short week the automobilists of New Jersey have come to the conclusion that they don't like the new automobile law. It gives motor car operators the right to whiz along city streets at 20 miles an hour as against "a mile in 7 minutes" provided for in the old bill. Governor Stokes said he hesitated before signing it; but as the antis and pros were made up of the farmers and the automobilists respectively, and the farmers said they were in favor of the compromise measure, he attached his signature to it. Now officials in cities and towns say 20 miles an hour is too much,

and the automobilists say, in effect: "Well, why didn't you put up a holler when the bill was before the assembly? It's too late now." Mr. Seovel, of Camden County, who introduced the original bill, thinks the compromise measure is a mistake in so far as the 20-mile clause in cities is concerned. He thinks the resulting accidents will cause a popular clamor for an early revision of the law. The opinion seems to be general now among the antis that the automobilists' lawyers gold-bricked them, but the latter point to the concessions they made in order to bring about an agreement. But it is a fact, nevertheless, that it is much safer to hit it up nowadays in Jersey than it was last year. That one clause which says, "Arrests may be made without a warrant when a speed of 30 miles an hour is exceeded" looked like a concession by the automobilists; but in actual practice it pans out as an additional concession to them—so say the antis.

Meantime the burning-up process is being carried to the legal limit by automobilists of the Quaker City who affect the trans-Jersey routes leading to the salty sea, the burners shouldering the additional burdens of a state license and fore-and-aft tags

DON'T FRIGHTEN HORSES

According to a decision rendered last week by the supreme court of Indiana a motorist is liable if he frightens a horse. It was in the case of Thomas Brown against the Indiana Springs Co. The motorist, a member of the latter concern, appealed from the decision of a lower court, which held him liable for damages to the extent of \$925. Brown, driving a team, was crossing the Wabash river bridge into Attica. At the top of an embankment he met an automobilist who, it is claimed, was driving his car 20 miles an hour and caused the horse to become frightened and run away. Brown was thrown out of his team and injured. Judge Hadley in the course of his decision said: "It cannot be said as a matter of law that appellants were guilty of negligence for using an automobile on a public highway. The law does not denounce motor carriages, as such, on the public ways. For as long as they are constructed and propelled in a manner consistent with the use of the highways and are calculated to subserve the public as a beneficial means of transportation with reasonable safety to travelers by ordinary modes they have an equal right with other vehicles in common use to occupy the streets and roads. Because novel and unusual in appearance and for that reason likely to frighten horses unaccustomed to see them is no reason for prohibiting their use. But appellants, in operating on the highway a novel wheeled conveyance of uncommon appearance and noise owed to the plaintiff and other travelers the duty to carefully control and drive the same along so as to avoid causing needless injury. This duty required appellants to take into account the character of their machine, its general appearance, the loud puffing noise sent forth while going, its new use in the vicinity and its tendency to frighten horses. When the defendants saw that plaintiff's horse had become

frightened at the rapid approach of the strange, noisy carriage, and that the plaintiff was in danger, which was reasonably certain to increase by the nearer approach of the motor, and from which it was plain he could not extricate himself except by defendant stopping or slowing down until plaintiff could reach the cross street, it was the highest moral, as well as legal, duty of the defendants to stop and remove the plaintiff's peril, rather than to increase it by rushing onward."

N. A. A. M. WILL FIGHT

The National Association of Automobile Manufacturers has begun its fight to test the constitutionality of the licensing system. The test case was brought in New Jersey. Harry Unwin, manager of the Harrolds Motor Car Co., of New York, drove an Oldsmobile in Jersey City. The car bore no New Jersey license tag, but carried a New York number. A policeman asked Unwin whether he had a New Jersey license. Unwin replied that his car bore license No. 15,229 and the name of the state. An arrest followed. Unwin was fined \$10. Mr. Terry, counsel for the N. A. A. M., at once gave notice of appeal. "The complaint charges Unwin," said the N. A. A. M. lawyer, "with driving an automobile in a public street without bearing a New Jersey registration number. The only justification for the licensing provision in the automobile statute is on the theory of police power on the ground that a vehicle capable of attaining a high speed and so being able to escape should have means of easy identification; but when a man has complied with the registration law of another jurisdiction and carries the number of his registration and the name of the state granting it, all the necessities of the case have been complied with, since he can easily be identified by the number and name of the state on his tag. Our case can be brought before the United States Supreme Court on a writ of certiorari or the New Jersey court may send the case to the United States Supreme Court to settle the right of a state to pass such a law."

LULL AT BUFFALO

There has been a lull in the anti-speed agitation in Buffalo during the last few days, but there is still some tendency among the city newspapers to exaggerate automobile accidents. A case in point was the account which appeared in several Buffalo papers of an alleged accident at Williamsville last Saturday. The papers had it that a party of Buffalo men would have been mobbed had the irate farmers of Williamsville been able to catch them after a motor car had demolished a wagon and nearly killed a little boy. The facts were that an old farm wagon was smashed, but neither the farmer nor his son was hurt and the motorists made a satisfactory arrangement with the farmer, promising to pay for the damage, although the farmer was driving half in the road and half in the ditch on the wrong side when he was struck. His rig was not visible in the dark as it would have been had he been on the white road. At Niagara Falls, however, the police have tardily followed the lead of the Buffalo bluecoats and an anti-speed crusade is on in that city. Tonawanda's police officials are still seeking whom they may arrest for exceeding the 8 miles speed prescribed and word has been received from Saint Catharines, Ontario, that a reward of \$25 is offered there for the arrest of any motorist who drives faster than the law allows.

A COMPETITION CONFETTI



Has Race Organization—The Grand Rapids Automobile Racing Association was organized recently in Grand Rapids, Mich. E. W. Dickerson is president. The organization will promote race meets and the first one is to be held August 1 and 2.

Oldsmobile Well Up—Baron Pierre de Crawhez, the Belgian sportsman and automobile driver, arranged a private automobile meeting some time ago in which many owners took part. The principal event was a skill competition, in which the Aries of Jacobs and the Vivinius of E. Minetti scored a dead heat, while the Oldsmobile of G. Jacobs was third.

Good Average Going—Seventeen motor cyclists started recently in the endurance run of the Westfalen and Lippe section of the German Motorcycle Union. The distance was 133 miles and eleven contestants finished the tour. M. Pieper on a Durkopp won first prize, having covered the distance in 5 hours 10 minutes. Sonnemoser, also on a Durkopp, was second, 6 minutes 14 seconds behind the winner.

Knox Loses Prize—Referee Chase has decided the protest which had been entered against the Knox car which won second place in the 5-mile race open for two-cylinder stock cars, run at the Readville track meet, Boston, on Decoration day. It had been claimed that the Knox car was not in touring form when it started in the race and the referee allowed the protest, giving second prize to the Winston and third to the Rambler. No decision was reached concerning the protest against the Columbia, which won the race, and troubles with other races have been settled.

Indians Lead—The annual Fort George hill-climbing contest for motor cycles was held Decoration day on the famous grade which is located near New York. The New York Motor Cycle Club has arranged the competition and a score of two-wheelers took part. The distance measured about $\frac{1}{2}$ mile, the grade being 10 per cent. Each starter was allowed two trials and the fastest climb of the day was made by C. S. Spencer, riding a two-cylinder $3\frac{1}{2}$ -horsepower Indian, whose time was 41 $\frac{1}{2}$ seconds. Stanley T. Kellogg, riding a 1 $\frac{1}{4}$ -horsepower Indian, climbed the

hill in 50 $\frac{1}{2}$ seconds, a remarkably good performance considering that he rode an ordinary touring machine, while Spencer rode a racing machine. The hill was in good condition for the trials.

German Track Meet—The Automobile Club of Frankfurt-on-the-Main, Germany, will hold a week of races on the local track in August. Famous drivers from many continental cities have promised to be on hand and the prizes will probably aggregate \$3,000.

Gives Second Prize—Chevalier Florio, the Italian sportsman who donated a valuable cup and \$8,000 in cash for prizes for the Florio cup race, to be competed for by racing cars, has donated \$1,000 for a race for touring cars. The latter will be divided into three classes, comprising respectively cars of less than 20-horsepower; cars of from 20 to 40-horsepower and cars of from 40 to 60-horsepower.

Continental Tire Prizes—In connection with the International Tourists' Trophy race which will be held in England in September, the Continental Tire & Rubber Co. of Great Britain has offered a prize of \$525, either in cash or plate, to the winner of the race, provided the car is fitted with Continental tires. The driver with Continental tires who makes the fastest circuit will receive \$50. Thus far thirty-three British, five French, one Belgian, one Dutch and three American cars have entered.

Belgium's Big Program—At a recent meeting of the Automobile Club of Belgium the schedule for the events in connection with the annual Ardennes circuit was adopted as follows: August 4, weighing of the small cars and motorcycles at Arlon; August 5, Ardennes circuit for small cars and motor cycles, weighing of the racing cars; August 7, Ardennes circuit for racing cars; August 7 to 12, week of races and competitions in Liege; August 13, Liedekerke cup race for touring cars, distance 260 miles; August 14, motor cycle criterium, distance 622 miles; August 15, motor cycle regularity cup race, distance 62 miles.

Second Kenwood Climb—The Minneapolis Automobile Club is preparing for its annual hill-climbing contest to be held Saturday, June 24. The event this year will be more interesting than ever before, because of the large number of high-powered machines which have been brought to the city. The climb will be held on Kenwood hill, as formerly. The Kenwood contests have become famous, because of the skill required to negotiate the sharp turns on the up grade. An effort was made this year to have the climb held on a longer hill, several miles out of the city. A proposition was made to the Minneapolis club by E. H. Moulton, Jr., that a day be devoted to the sport, the cars running out in the morning, then taking part in the contest, and running in at night. The club has decided to renew the Kenwood contest, however, as



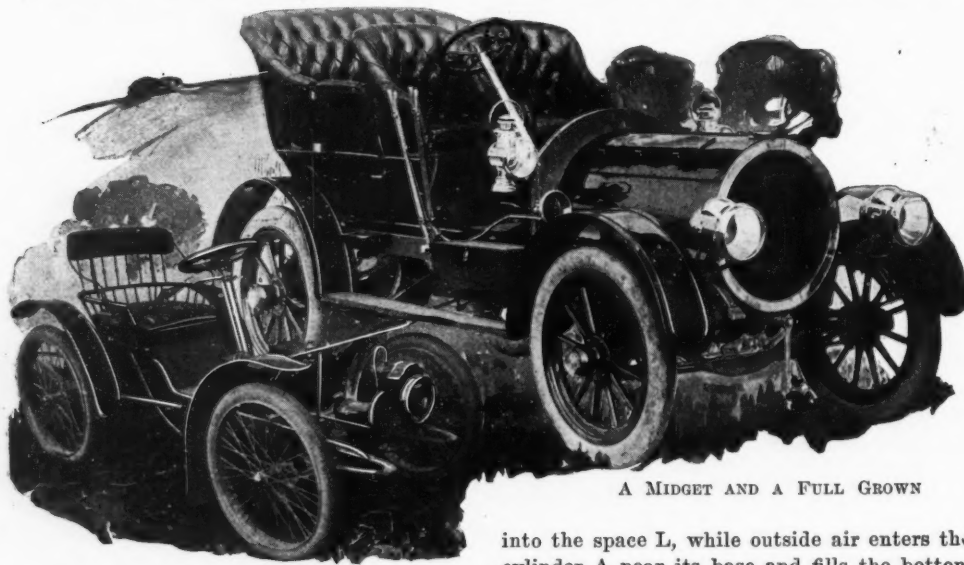
more entries will be secured. The rules of the American Automobile Association will be followed this year, the cars being graded according to weight, instead of according to price, as formerly. The number of entrants greatly exceeds that of last year.

Syracuse Meet September 16—The Automobile Club of Syracuse held a meeting last Friday night to consider the matter of holding a race meet. It was announced that the American Automobile Association had reserved September 16 for that city. This is the last day of the State fair and a large crowd is assured. The first races in Syracuse were held at the state fair track 2 years ago and drew a crowd of 10,000.

Want Barney Again—Motor car races may be among the features of the Wisconsin state fair. The board of managers is considering it and if a good card is obtainable a big race may be arranged. Manager Pickens, representing Barney Oldfield, has offered his assistance to make the race a success if the board decides to hold one. The matter will probably be decided at the board's next meeting. Since the unfortunate accident which resulted in the death of Frank Day on the state fair grounds, the board has been loath to consider automobile races. However, the happy conclusion of the meet of last week without a single accident to mar it promises to reassure the board members. Many board members consider the fair week an ideal time for holding automobile races. Farmers are present, and may lessen their apathy for the automobile.

Hill-Climb at Cleveland—The feature in connection with the club run of the Cleveland Automobile Club, on Decoration day, was the hill-climbing contest, held on the west hill at Gates Mill. From among the two score cars which took part in the run a dozen climbed the hill, the 40-horsepower stripped Stearns, driven by Frank B. Stearns, being the fastest, covering the mile less 200 feet in 1:19 4-5. Considering that the ground was rough and that the grade averages 8 per cent, this climb was rather fast. Harry Savage, in a 32-horsepower Peerless, which had its full touring equipment, climbed the hill in 1:30, while the 24-horsepower Pope-Toledo driven by R. H. Magoon required 1:47 4-5 to reach the top.

AUTOMOBILE DEVELOPMENT



A MIDGET AND A FULL GROWN

A MIDGET RUNABOUT

The smallest automobile in the state of California is owned by C. V. Randall, of the Automobile Cyclery, of San Jose. It is a unique yet durable automobile and of the little car Mr. Randall had the following to say: "The Little Monster is a thoroughly practical machine and no freak. It is probably the smallest bona fide automobile ever built in this country. Its weight with full equipment, including gasoline, is 365 pounds. It can carry $3\frac{1}{4}$ gallons of gasoline and runs about 60 miles to the gallon. The tread is 36 inches, wheel base 54 inches and height from the ground 26 inches. The machine is equipped with a $2\frac{1}{4}$ -horsepower de Dion motor and is geared normally to 18 miles an hour. The little car has made 27 miles an hour, however, on the San Jose-Oakland road. Being a firm believer in the light automobile for a business city runabout, the owner built the car for his personal use. He took the motor, wheels and the axles of an Orient quadricycle and built the rest according to his own design. He used leather instead of wood for finishing to eliminate rattling. The Misses Nina and May Welch recently made a trip around the foothills and the little machine gave perfect satisfaction, the young ladies having no trouble whatever in forcing the car up the steep inclines.

IMPERIAL-WIXON PUMP

The Imperial-Wixon compound air pump for inflating tires has an outside cylinder A screwed into the base piece I, another smaller one B to which the pump handle is fastened and which acts as the piston or plunger part and a hollow central rod C within the cylinder B. The last one is continuous with the hose J to the tire by being double elbowed within the base piece. When in operation the cylinder B is the only moving part. In the pump are three different air spaces through which the air passes before it leaves for the tire. The first space is an annular one K between the cylinders A and B, the second an annular one between the cylinder and the hollow rod C and the third is within the cylinder B and above the check valve M.

In starting the pump all of these spaces are filled with air. When the handle is raised, carrying with it the cylinder B, the air in space K is forced through openings

into the space L, while outside air enters the cylinder A near its base and fills the bottom part of the cylinder as B rises. When B has reached the top of its stroke the ring F on its base which is a sliding fit in A has forced all of the air in space K into L but while B has been rising the space L has been gradually becoming smaller because of the ring G forming a sliding fit within B and so the air passes from L through the yielding head into the space above the ring G, all the air being in it at the completion of the stroke. On the down stroke the air in it is forced past the check valve M into the rod C and through it to the tire. The pump is manufactured by the Imperial Brass Mfg. Co., 245-247 South Jefferson street, Chicago.

THE IMPERIAL CARBURETER

The Imperial carbureter, a product of the Imperial Brass Mfg. Co., of Chicago, dispenses with the usual float and float chamber; the admission of gasoline being controlled by a needle valve in the mixing chamber, which is opened with every suction stroke of the motor, and which at each stroke admits sufficient gasoline for that stroke.

Air enters the mixing chamber through the opening A in the bottom of it, gasoline from the tank is conducted through the pipe B, and mixture passes to the motor through the tubing C, its passage being under the control of the butterfly valve N, controlled by a hand

lever or governor. Within the pipe B is a vertical valve stem E, with an enlargement F near its lower end, which acts as a valve for admitting and shutting off the flow of gasoline. The valve is ordinarily held shut by the coil spring G surrounding its stem. The stem F is extended below the valve part F and forms D the stem of the air admission valve K. In the casing surrounding the stem, beneath the gasoline valve, are perforations H, by which the gasoline passes into the mixing chamber M.

With every suction stroke of the motor the air valve K is lifted so that air may enter, but its stem being integral with that of the gasoline valve F the latter is raised at the same time and gasoline admitted. As soon as the suction stroke ceases the air valve closes and with it closes the gasoline valve. Both valves being open the same length of time it is possible to adjust them so that the required amount of gasoline is admitted at each stroke. The butterfly valve is adjusted to automatically close to a position at which the motor will revolve at its minimum speed after it has been opened to its maximum for fast speeding.

CHADWICK FILTER

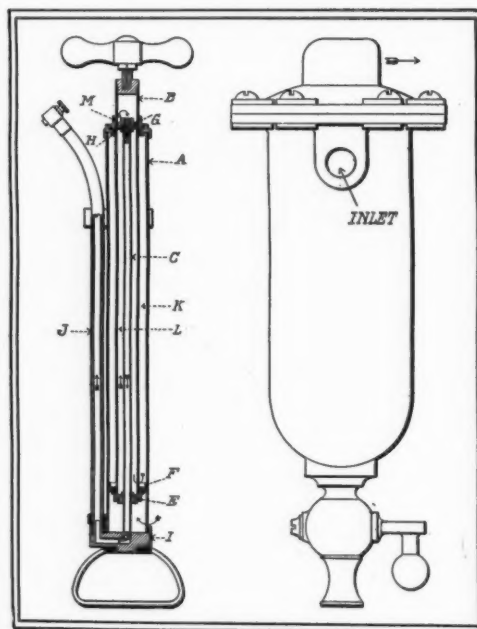
The Chadwick gasoline filter, made by the Fairmount Engineering Works, of Philadelphia, is a simple device for placing in the feed pipe from the gasoline tank to the motor for removing the water and other impurities from the gasoline. It is a cup-shaped vessel, being much greater in depth than diameter and with a drip cock in the concave bottom. The top is flat and is bolted to a flange around the mouth of the cup. In the side of the cup near the top is an opening for the pipe from the tank and in the center of the detachable top is another opening for the pipe leading to the carbureter. Between the flange and the head is clamped the edges of a circular chamois or gauze diaphragm that stretches across the cup, dividing it into an upper and lower part. The intake from the gasoline tank is below the diaphragm and the outlet to the carbureter above it so that all gasoline must pass through it. The cup is made deep so that a head of gasoline will always be kept in it, giving any water time to settle to the bottom of the cup, it being heavier than gasoline, so that it can be drained off.

The filter must always be placed vertically in the car in order that water will have a chance to settle. Placing it in this position is always possible by using elbows in the feed pipe from the tank.

THE COAT OF MAIL

The Coat of Mail is the name the Post Mfg. Co., 1908 Broadway, New York, gives its metal surface tire tread. Encircling the tread of the tire is an endless band of three plies of rubber and fabric, the same as used in the tire, and on this band is a metal tread of small hexagonal plates. The plates, made of rolled steel, are 1-16 inch thick and set so closely together that they touch one another on all sides. Their side measurements being only $\frac{3}{4}$ inch the flexibility of the band is not much impaired by their presence. These hexagonal plates are in continuous rows around the tread, two, three, four, five or more rows being used according to the diameter of the tire.

Each plate is fastened to the tread band by a rivet running through its center and through the band, having a flat head beneath the tread.



IMPERIAL-WIXON PUMP

CHADWICK FILTER

Within the plate the rivet head is in the form of a small tooth, projecting $\frac{1}{8}$ inch above the face of the plate so as to prevent slipping. To secure the tread band to the outer tube of the tire every third rivet in the outer rows not only passes through the metal plate and the tread band but also through the wall of the outer casing of the tire. Between the rivet heads and the inner or air tube are placed two rubber buffers, which protect the tube from injury by the rivet heads. The weight of each tread is approximately 10 pounds.

GOODRICH TIRE TOOLS

The B. F. Goodrich Co., Akron, O., manufacturer of Goodrich clincher tires, is placing on the market the Goodrich tire tools used for removing tires from wheel rims when making repairs. The tools are four in number—two prodders, a wheel brace and a ratchet wrench. Both prodders are made of steel, the smaller one with one end slightly curved and the other, much longer, with one end curved as in the smaller one and the other end lipped. The curved ends and lips are made to fit the rims of the wheels, so that power is not lost in removing the tire casing. The wheel brace has a semi-circular fork at one end for resting against the spoke of the wheel and at the other end is pointed for resting on the ground. The wrench is straight, with a hexagonal eye hole in the enlarged end for removing nuts from the tire lugs.

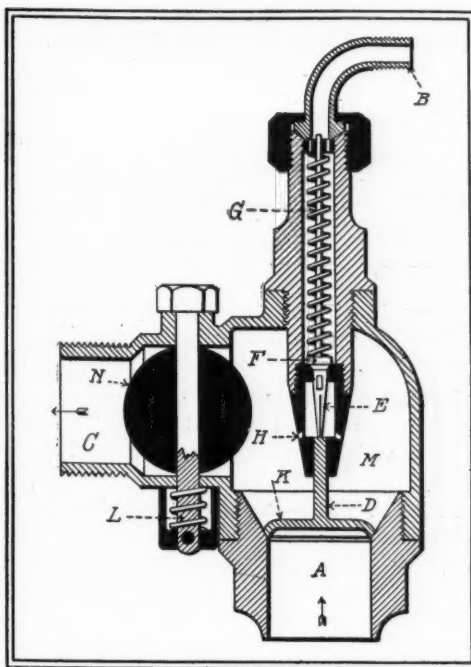
WILL MAKE BERLIET CARS

Announcement was first made in MOTOR AGE some weeks ago that the American Locomotive Co. was to go into automobile building and would erect for that purpose a plant at Providence. The company is to devote its plant to the manufacture of Berliet cars. The plant will be erected adjacent to the company's Rhode Island locomotive works. Negotiations have been completed with the makers of the Berliet cars at Lyons, France, whereby the sole rights to build the cars in the United States and Canada have been secured. "By the terms of the contract," says President Pitkin "all specifications and drawings are to be given us so as to permit of our making an exact reproduction of the French machine. We will also have the advantage of all data pertaining to any improvements which may be developed by the French firm. The initial output will be about 200 cars. The first machines are to be of 40 horsepower and 25 horsepower. The car is to be equipped with a four-cylinder gasoline motor, the cylinders of which are cast in pairs without joints."

THE BEAVER MOTORS

The Beaver Mfg. Co., of Milwaukee, is manufacturing a 22-24-horsepower vertical 4-cylinder motor and a 12-14-horsepower double-opposed one. In the former the $4\frac{1}{4}$ by $4\frac{1}{4}$ -inch cylinders are cast in pairs and have the mechanical inlet and exhaust valves side by side in ports on the left. The cylinder walls, water jackets and valve ports are all integral. Each pair of cylinders is bolted in the usual way to the top part of the crank case and the motor is supported on the car frame by this part of the case so that the bottom of the case may be removed to make inspections. On either side of the case are two inspection plates and on the bottom are two others for removing the connecting rod caps without removing the entire base of the case.

The valves are actuated from a single cam



IMPERIAL CARBURETOR

shaft contained in a separate chamber in the top part of the crank case. The sleeves for the plunger rods for each pair of cylinders are integral with a casting bolted to the top of the crank case and which carries on its under surface guides for the plunger rods. A V piping connects the carburetor with the pairs of inlet valves, there being but one pipe for conducting the mixture to each pair of inlet valves. The exhaust piping is an integral piece running horizontally along side of the cylinders and with a separate branch to each exhaust valve. The timer is carried on a vertical shaft at the rear of the back cylinder and is gear driven from the cam shaft.

The horizontal motor has the valve ports and cylinder heads integral with the cylinder walls, the ports being above the cylinder bore. The

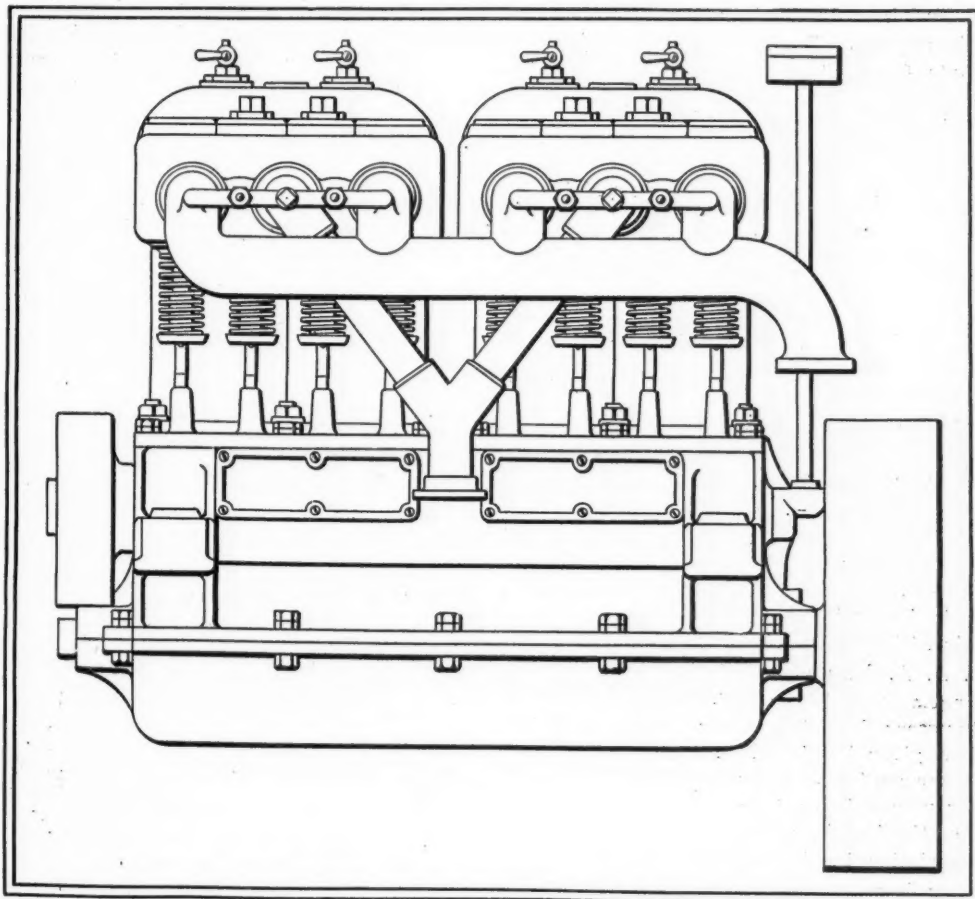
mechanical valves lie side by side in the inner side of the ports and are operated from a cam shaft in the top of the crank case. The timer is on one end of the cam shaft. The valves can be removed through screw inspection caps in the ports. The spark plugs are in the center of the cylinder heads, and integral with the cylinders are lugs for carrying the motor on the frame. Cooling water can enter and leave the jackets from different places.

MOTOR CAR LITERATURE

National leather tires, made by the National Leather Tire Co., of Owosso, Mich., are described in a neatly-put-together booklet by their manufacturer. Three pages are devoted to illustrating the three types made—the regular clincher with leather shoe, the tire for flat rims, and one mechanically attached. By printing in two colors, using wide margins and tinted paper the appearance of the booklet is much increased.

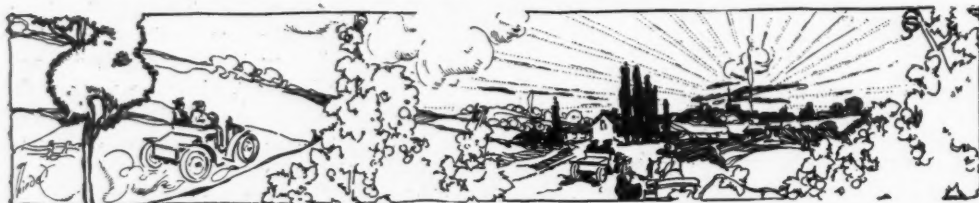
The Chainless Wolverine—the car of merit, embossed on the cover and illustrations on half pages alternated with the full size descriptive pages combine in making the present catalogue of the Reid Mfg. Co., of Detroit, Mich., one of the attractive and yet simple ones of the season. The illustrations are small but being numerous and the parts lettered with an accompanying key makes it easy to follow the lines of construction in the car.

The Fisk Tire and Its Fastening is the subject of a small but well prepared book circulated by the Fisk Rubber Co., of Chicopee Falls, Mass. Special emphasis is placed on the materials used in the manufacture of the tire, as well as on the mechanical method of fastening it to the rim. On one page is a map of the United States showing all Fisk depots and branches from New York to San Francisco. All sizes in which the tires are made for pleasure cars and commercial vehicles, together with prices are included.



VALVE SIDE BEAVER FOUR-CYLINDER MOTOR

MANUFACTURING MISCELLANY



Making Boat Motors—The R. M. Cornwall Co. of Syracuse has commenced the manufacture of gasoline engines for boats. The whole outfit will be furnished so that a person can transform a rowboat into a motor boat upon short notice.

Building Special Cars—The Pullman Auto Car Co., of 5035 Cottage Grove avenue, Chicago, is building several special cars for this season's delivery. If its present plans are followed out the company will build cars on a large scale for the 1906 trade.

Joins Reo Forces—The Reo Motor Co., of Lansing, Mich., has appointed I. R. Campbell, of Des Moines, Ia., state sales manager for Iowa. Campbell formerly had the local agency for the Oldsmobile and later was connected with the Iowa Automobile Supply Co.

Making Only Motors—Since the death of Mr. Lamb, of the Lamb Boat & Engine Mfg. Co., of Clinton, Ia., the concern has decided to discontinue making boats and will hereafter manufacture engines alone. Particular attention will be given to marine motors, but it is not unlikely that before the season ends motors for commercial and pleasure automobiles will be a part of the company's product.

St. Louis Factory May Move—The St. Louis Motor Carriage Co., though it has not definitely decided to locate elsewhere, will probably remove from St. Louis. Jesse French, Sr., president of the concern, said: "Though there is a possibility we may not remove from St. Louis, we expect to do so this summer. St. Louis offers no inducements for us to stay, while the taxes and licenses of all kinds are very high, as well as the freight transfer charges from East St. Louis. Other cities are begging us to locate with them. Some offer us our factory and tax exemption, and others offer equal inducements. I am going to Pana, Ill., Wednesday to spend 3 days investigating the proposition which that city has given us." Mr. French deplores the passing of the single-cylinder runabout, which he still holds is superior to the runabout of more complicated construction.

Accessory Men Meet—The directors of the Motor and Accessory Manufacturers met at Hartford, Conn., last Saturday and admitted to membership the Diamond Chain Co., F. H. Wheeler, Columbia Bolt & Nut Co., Standard Roller Bearing Co., American Electrical Novelty Co., Atwater-Kent Mfg. Works and Hartford Suspension Co. The committee appointed by the association to confer with the L. A. A. M. reported that satisfactory arrangements had been made for the Motor and Accessory Manufacturers to exhibit at the show given by the L. A. A. M. at Madison Square garden, January 13 to 20. The board was prepared to act on a similar proposition from the American Motor Car Manufacturers' Association, but in the absence of any proposition it was necessary to postpone definite action until some future date. A committee

was appointed with the power to act at such a time as a satisfactory proposition should be received.

Has New Quarters—New quarters were recently secured by the Bailie Basket Co., of Boston, which is now located at 85 Hudson street.

F. A. V. E. B.—A New automobile manufacturer in Italy is the Fabbrica Automobile Velocipedi Ed Branchi & Co., with headquarters in Milan. The concern's capital is \$180,000.

Built By Rapid—The Rapid Motor Vehicle Co., of Pontiac and Detroit, Mich., informs MOTOR AGE that the three delivery cars being used by the Motor Express Co., of Saginaw, Mich., were built by that concern and are doing good work.

Packardites Walking—Probably unique among automobile manufacturers is the case of the Packard Motor Car Co., of Detroit, which reports that in order to accommodate as many customers as possible with Packard cars, it has been necessary for the officers of the concern to turn in whatever cars they had. All the cars, whether of this year's make or several years old, have been sold, as well as all the demonstrating cars. Some of the officers and higher employes have again adopted the bicycle and the street cars as a method of locomotion, while others walk.

Thomas Enlarges Again—The E. R. Thomas Motor Co., of Buffalo, has filed with the department of buildings plans and specifications of its new factory building. Bids for the construction will be received at once. The factory is to be unique in Buffalo in that only glass, steel and concrete will be used. The structure will be 50 by 450 feet and four stories high. The floor space will be 90,000 square feet. Floors will be made of concrete and the supporting structure of steel. The glass, through which a strong wire mesh will run, will make the ends of the building. This will provide an unusual amount of light. This factory is to be located on the lot directly west of the present Thomas factory No. 1 on Niagara street. The land was bought during the week of the Buffalo show. In the new factory 1,200 men will be employed at the outset, but the number will be increased later. Besides this new factory No. 1 the Thomas company will operate its present No. 1 and the two other plants which are in operation now. At present the Thomas force is working nights, some of the em-



ployees working 90 hours a week. The output this year will be nearly three times as large as in 1904.

Larger Quarters—The Fairmount Engineering Co., 2652 Callowhill street, Philadelphia, maker of the Chadwick car, has increased its business to such an extent that a change was rendered necessary in order to secure needed room. Last week it moved, bag and baggage, to a new establishment on Spring Garden street, where it has ample room for expansion. The Callowhill street shops have been acquired by Manager Smith, of the Philadelphia branch of Thomas B. Jeffery & Co., as an additional storage and repair establishment.

Foreign Electrics Arrive—Two Gallia electrics, said to be the first French electrics to be imported to this country, were cleared at the New York custom house this week. They were consigned to Count Armand de Gintaut Biron and Bernard Maurice Dufresne. Both of these gentlemen are stockholders in the Societe L'Electrique, the maker of the Gallia cars. They say they were imported merely to show to friends here, but it is surmised that they have in mind the establishment of an American agency. Both cars have landaulet bodies by Million-Guiet, and are extremely smart in appearance.

Rapid Plant Increased—The Rapid Motor Vehicle Co., of Detroit and Pontiac, Mich., manufacturer of commercial cars, has decided to increase its capital stock to \$200,000 and to have a new plant erected in Pontiac. The plans of the structure provide that it will be located near the Franklin road and will be 500 by 60 feet. In every respect it will embody all the latest improvements, and when completed will be one of the most up-to-date automobile plants in the world. This concern, which is not one of the oldest in the land, has been doing such a satisfactory business that it was found necessary to either enlarge the present plant or build a new one and to considerably increase the working fund. The officers of the concern are A. G. North, president; H. G. Hamilton, treasurer; Max Grabowsky, secretary, and Morris Grabowsky, general manager. F. G. Jacobs and the officers form the board of directors.

Pittsburg Making Center—Pittsburg bids fair to become a consequential manufacturer of automobiles within the next 2 years, for two extensive plants are now in contemplation. George Westinghouse is considering the advisability of establishing a plant at East Pittsburg, where Westinghouse-Schmidt automobiles will be made. One month ago Mr. Westinghouse brought to this city one of the automobiles made by his company in France. It was exhibited in the garage of the Keystone Automobile Co. and attracted favorable attention. Shortly after it was learned that Mr. Westinghouse had taken up the matter of building an immense plant at East Pittsburg next year but no details of the operation have yet been announced. The other automobile factory will be owned and operated by the Synnestvedt Machine Co., which has been making automobiles on a small scale for several years. A large tract of land was recently bought as an addition to the concern's plant and the factory is now being enlarged to more than treble its capacity. Mr. Synnestvedt has brought out a machine which he thinks is especially adapted to the hills and narrow streets of Pittsburg.

AFFAIRS OF AUTOMOBILE CLUB MEN

Bad Number—The Canton Motor Club, recently organized in Canton, O., now has thirteen members.

Nearing Hundred Mark—The Peoria Automobile Club, of Peoria, Ill., now has sixty-seven members.

Club in Bryanville—The Automobile Club of Lincoln, Neb., was organized last week. George W. Holmes was elected president, C. G. Crittenden vice-president, M. D. Eames secretary and W. H. Dorgan treasurer.

Gains In Membership—The Automobile Club of Colorado Springs, Colo., has now ninety-two members, of which seventy are active. Dr. C. A. Holder is the president, J. K. Vanatta vice-president and W. Arthur Corey secretary.

Club at Santa Barbara—Motor car owners of Santa Barbara, Cal., recently organized the Santa Barbara Motor Club. C. B. Hale was elected president and W. S. Reddington secretary and treasurer. The club has about twenty members.

Their Waterloo Coming—At the annual election of officers of the Waterloo Automobile Club, of Waterloo, Ia., G. B. Miller was made president, L. S. Cass vice-president, and F. L. Northey secretary and treasurer. H. B. Boies is the club's attorney.

Here's a Big Club—It is said there are three automobile owners in Menomonie, Wis., and that an automobile club will soon be organized. The president of the club will at the same time hold the other offices, consisting of the treasury, secretary and captain.

Parade at Des Moines—The automobile parade promoted by the Iowa Automobile Club, of Des Moines, was held May 29 and proved a success. Twenty-seven decorated cars, carrying nearly 100 persons, were in the procession, which went through the main streets of the city.

George Again President—The annual election of the Automobile Club of Detroit took place May 31. Edwin S. George, who has been president since F. O. Page resigned 2 months ago, was unanimously re-elected; F. O. Page is first vice-president, D. M. Ferry, Jr., second vice-president, Harry Skillman secretary and Louis H. Case treasurer. Skillman, Ferry and H. G. Hamilton were elected members of the board of directors for 3 years. Committees on laws and ordinances, membership, tours and runs and house were also elected.

Hot After Scorchers—A few weeks ago members of the Automobile Club of Philadelphia offered Director of Public Safety Smyth the use of several cars to assist in abating the scorching evil on South Broad and other streets. Before the director had time to act on the offer Mayor Weaver fired him for his too apparent activity in the gas lease extension matter, which caused such a political revolution in the Quaker City. On Friday last the club renewed the offer, and the new director, Lincoln Acker, has promised to take advantage of the opportunity to put a stop to the nuisance. The Philadelphia branch of the chauffeurs' national association last week adopted a resolution of sympathy with their New York brethren in the fight of the latter against the reckless and incompetent members of their profession.

The Philadelphians strongly favor compelling operators to pass a thorough test before allowing them to handle a car on the streets.

Carries Pennant—The New York Motor Club has had a pennant made, consisting of silk on an aluminum staff, with adjustable holder for attaching the pennant on the body of automobiles.

Tour Route Book—The Albany Automobile Club, of Albany, N. Y., has issued a folder giving information about the route to be followed during the 4-day tour which will be started June 16 to New York and return.

Has New Officials—The election of officers for the Newport Automobile Club, of Newport, R. I., resulted in Henry Bull, Jr., being elected president, Philip Caswell vice-president, William S. Cooper secretary and Philip F. Conroy treasurer.

After Them All—Within less than a week 110 applications for membership were received by the Automobile Club of Minneapolis, and it is hoped by the officers that by the first week in July the club will have 600 members. The present membership is less than 200, but within the last few weeks the membership committee has worked hard to get all the owners in the city to join.

Worcesterites Active—One of the most active clubs in the east is the Worcester Automobile Club of Worcester, Mass., which has among its members some of the most prominent automobilists in the country. The hill-climbing contest on Dead Horse hill, run recently and a great success, was promoted by the officers of the club and will very likely become an annual affair. The following are the officers of the club: John P. Coghlan, president; Dan F. Gay, vice-president; F. E. Frost, secretary; W. Stark, treasurer. The board of directors is composed of B. Austin

Coates, G. D. Webb, M. Percival Whittall, Albert H. Inman and Asa Goddard.

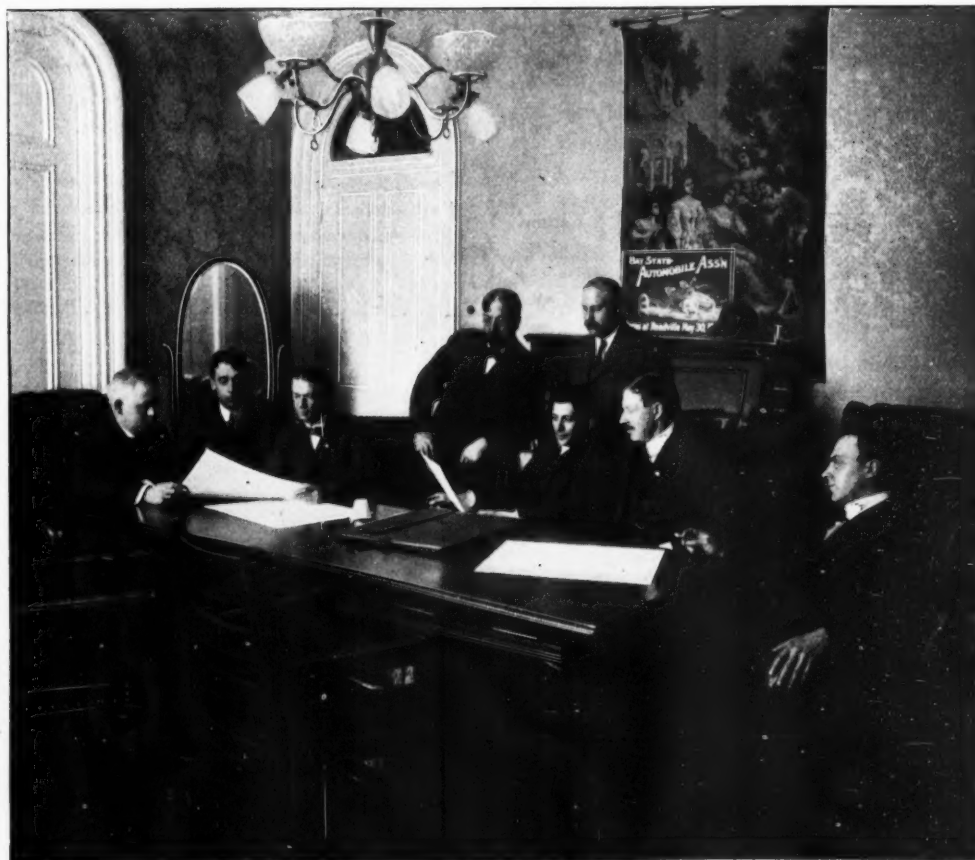
Wants Iowa Organization—F. Kern, secretary of the Des Moines Automobile Club, of Des Moines, Ia., is agitating the matter of forming a state organization and is visiting the various clubs in Iowa for this purpose.

Arranging Night Parade—President Harvey B. Dale, of the Oshkosh Automobile Club, of Oshkosh, Wis., is planning a club run and a night parade, in which all the club members are to participate as well as independent owners.

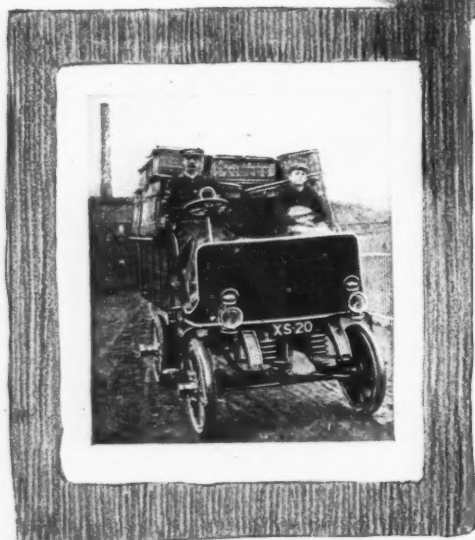
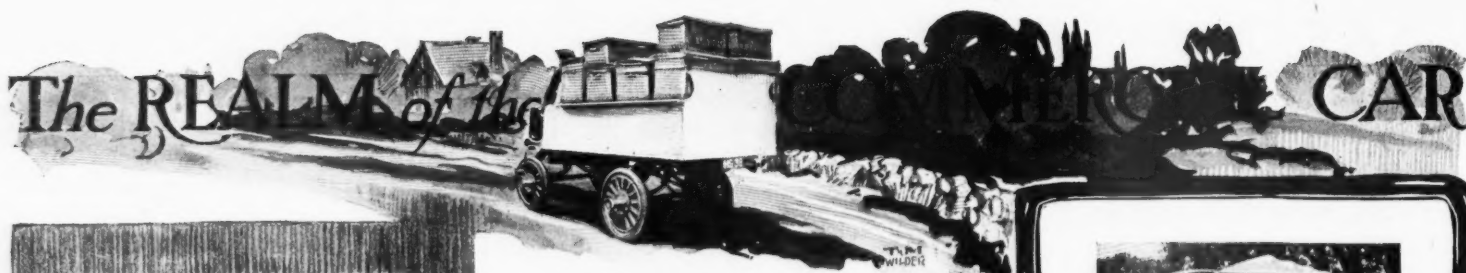
Took in Three Dozen—The Colorado Automobile Club, with headquarters in Denver, accepted thirty-six candidates for membership a few days ago. The club now has more than 250 members. No decision has yet been made where the new club house will be erected. Three sites are available and are being investigated.

Twins Get Together—A smoker was given by the Automobile Club of Minneapolis a few days ago in honor of the members of the Automobile Club of St. Paul. More than 100 members of the two clubs gathered and spent a pleasant evening. It was announced by Asa Paine that June 24 had been selected for the holding of the hill-climbing contest, which will probably be held on Kenwood hill.

Dangerous Corner—Automobilists are advised by the Automobile Club of America to be careful when driving in Scarborough, on Broadway near the Albany post road. There is an exceedingly dangerous corner in front of the Presbyterian church, where the Briarcliff road and the road to the Scarborough railway station meet on Broadway. The approach to Broadway is masked on one side by a high brick wall and the road is down grade, and on the other hand by a sharp curve, which at night is very dangerous.



OFFICERS WORCESTER AUTOMOBILE CLUB IN SESSION



The commercial wagon in America has had an up-hill road to climb; it started the ascent of conquest about 3 years ago, its march has been rather slow, but it is succeeding, and while the pace was snail-like at the start it is now quickening and the entry of each succeeding firm into the manufacture of the commercial vehicle quickens the pace and aids the cause.

This initial slow progress was due mainly to two causes. The majority of American manufacturers were too busy making pleasure vehicles to bother experimenting along the commercial line. Each season found them behind in spring deliveries, and it was impossible to expect they would forsake this fruitful field for others less known. Commercial vehicles were not fairly treated by business men at the outset. The business man, ignorant of the gasoline engine as well as carbureter transmission and other important parts of the motor car, imagined that his horse driver was capable of handling a steering wheel and manipulating a couple of levers and as many pedals. He was right to an extent, but herein lay the cause of the solar plexus blow the commercial wagon received at the hands of many business men. The wagon was not properly handled. Many were run for weeks at a time without seeing the repair shop for little adjustments and repairs. The business man forgot that a stitch in time saves nine and that with commercial wagons a dollar in time more often saves ninety-nine than nine.

Break downs came fast and furious. The carbureter was not well adjusted or the motor properly lubricated and the car stalled, necessitating sending horses to tow it in. Speed gears were changed without proper precaution and the stripping of a gear meant nearly a week's delay, during which interval changes were taking place in the business man's mind regarding the relative reliability of the motor as compared with the horse. In nine cases out of ten the horse was given preference and commercial motor blackeyed.

The driver was never blamed. He could not possibly be to blame. For years he drove one, two and often four-horse wagons and

BRITISH LAUNDRY WAGONS AT WORK

was capable of handling as many more. The owner never for one moment considered the delicate machinery plant hidden beneath the bonnet and wagon body. The system of ignition was not considered or was it thought necessary that the driver should possess a knowledge of the rudiments of electricity. The same was true of all other parts and while the first commercial wagons were running the gantlet it often looked as though the beginning of the end was near.

But all business men were not so; some there were who realized that even machinery is limited to loads and speeds and that it too will wear out. To these men is due much of the credit for safely piloting the business wagon through its swaddling garment period. One or two of these pioneers in the bigger cities hung to the game with a tenacity born of determination; they worked and experimented and did everything to reduce expenses, from buying lubricating oil at wholesale to building separate repair shops and making their own repairs. Others followed their efforts and while the progress was slow it became evident that with the education of the driver and the measuring of the possibilities of the car the commercial wagon was a success in its infant days.

What it has gone through in America it has experienced in other countries but in no place has it been so favorably received as in England. England, France and Germany are the homes of good roads; France and Germany have used theirs for the pleasure car, but England with her cities of manufacturing industries and harbors lined with wharves has wrestled with the commercial problem more than all others combined and it is not surprising that she has advanced far beyond all competitors.

For several years there have been 2,000 light delivery wagons in use, with load carrying capacity ranging between 560 and 3,200 pounds. These had, 9 months ago, a total mileage of over 20,000,000 accredited to them. At the same time 2,164 business vans were in use; the number of public service wagons for passenger use was 443; the number of heavy hauling trucks 902 and lighter hauling wagons 599. Since these figures were compiled the



numbers have increased rapidly, in some classes they have almost doubled.

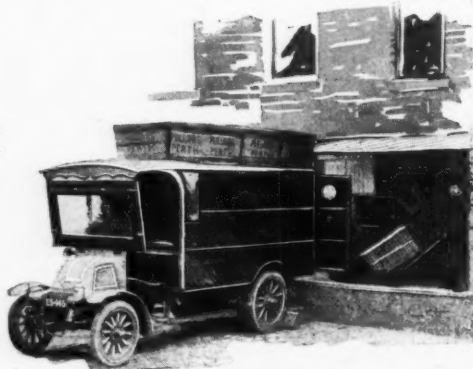
The laundry industry in particular has figured prominently in the use of commercial wagons. Both steam and gasoline are used, but the electric, owing to limited mileage, has not come in for much favor. The majority used are gasoline.

It has been found that the motor wagon pays best where more than three single horse wagons were used, in cases of fewer horse wagons the figures were unfavorable owing to not enough work coming to it. In big establishments it pays best, as they generally have longer trips and larger loads. The commercial wagon is the greatest gainer in long trips. If a 6 or 8-mile trip has to be made before deliveries commence it is a great saver, as such trips kill the horse but permit the motor wagon to find itself.

Among many interesting experiments made by owners one stands out prominently. The wagon used was a 10-horsepower Ryknield gasoline machine. It made, with a 1,200-pound load, eighty deliveries, traveling 91 miles. The total time consumed was 13 hours 6 minutes; the time consumed in stoppages 6 hours 17 minutes, leaving 6 hours 49 minutes of actual traveling time, or a speed of 13½ miles an hour. This speed may seem slow, but when it is remembered that there were eighty stops and starts made the speed made at times must have been over 20 miles an hour. Horse wagons were used at the same time over the same route and with the same loads, but required 10 hours more to do the work and each wagon only carried half the load of that taken by the motor wagon. Several similar tests were made under similar circumstances, with almost identical results.

With another company a 1-ton Milnes-Daimler wagon has covered 8,000 miles in 18 months; a performance which means, counting twenty-six working days to the month, that the wagon has covered 445 miles each month or 17 per day for the entire period.

The prices and expense of wagons in England vary from those in America in that their streets and country roads are equal to our boulevards, meaning a big reduction in tire expenses, but against this must be placed the price of gasoline, which is more than double that in America. With them a 6-horsepower delivery wagon costs \$900 and can carry a maximum load of 560 pounds, with a daily mileage of 30 at an expense of \$2.24, and for an additional 84 cents outlay this



LOADING A LAUNDRY VAN

Summary of Service of English Laundry Cars for Period of 18 Months

MOTOR.	LOAD, POUNDS.	FIRST COST.	AVERAGE WEEKLY COST.	AVERAGE WEEKLY MILEAGE.	DAILY STANDING CHARGES.
6 horsepower	336 to 560	\$ 900 to \$.....	\$13.19	180	52c
8-16 horsepower.....	896 to 1,792	1,320 to 1,708	20.48	300	78c
14-20 horsepower.....	2,000 to 4,000	1,708 to 2,930	\$24 to \$39	300	78c to \$1.86

performance can be doubled. A two-cylinder 10-horsepower wagon will carry an average load of 1,344 pounds 50 miles each day at an expense of \$3.72, and will double the service for an extra expense of \$1.94. This wagon costs \$1,470. These figures include depreciation, maintenance, storage, driver and insurance. A wagon of the later class will replace four horses and from two to four drivers and for a total weekly outlay of from \$21.44 to \$23.84 it will be seen it compares favorably with horse-drawn wagons.

The accompanying summary is based on an 18-months' service of many different makes of commercial wagons working on streets of variable surfaces and during all kinds of weather.

LINE TO BULLFROG

Fred W. Gregory, until recently manager of the automobile department of the White Sewing Machine Co., at San Francisco, left last week for Los Vegas to take up his duties as general manager of the Nevada Transportation and Trading Co., which will promote an automobile stage line to the Nevada mining region. Mr. Gregory expects to have several cars in service on the stage line between Los Vegas and Bullfrog by next week. Within 30 days he will have twelve White touring cars, making daily round trips from Los Vegas to Bullfrog, Goldfield and Tonopah. Los Vegas is situated on the new Salt lake road of Senator Clark, and with good automobile service one will be able to go from San Francisco through to Bullfrog, 110 miles from Los Vegas, in about 35 hours. This route is the prospective inlet for travelers, who will reach the mining region anywhere from 10 hours to a day and a half sooner than by going north from this city and depending on the connections made in going by way of Reno. Mr. Gregory is an old automobile man and took with him sufficient experienced men with the White car to enable him to give an absolutely reliable service between the two points. He has taken a complete equipment to outfit a garage at both Los Vegas and Bullfrog.

All the machines will be equipped with the latest cape tops. They will also have equipments for carrying light baggage and every device that will add comfort to the traveling public.

STEAM BUSES IN PARIS

Although Paris is considered the premier automobile city of the world, London is far ahead of the French capital in the matter of passenger transportation within its city limits. Hundreds of motor vehicles are in use



FOR BULK AND WEIGHT

and are giving entire satisfaction. In Paris automobile omnibuses were tried several times, but have never given the expected results. Even the electric cabs were found unsatisfactory for a time. The trouble seems to have been that the right kind of vehicles were not used.

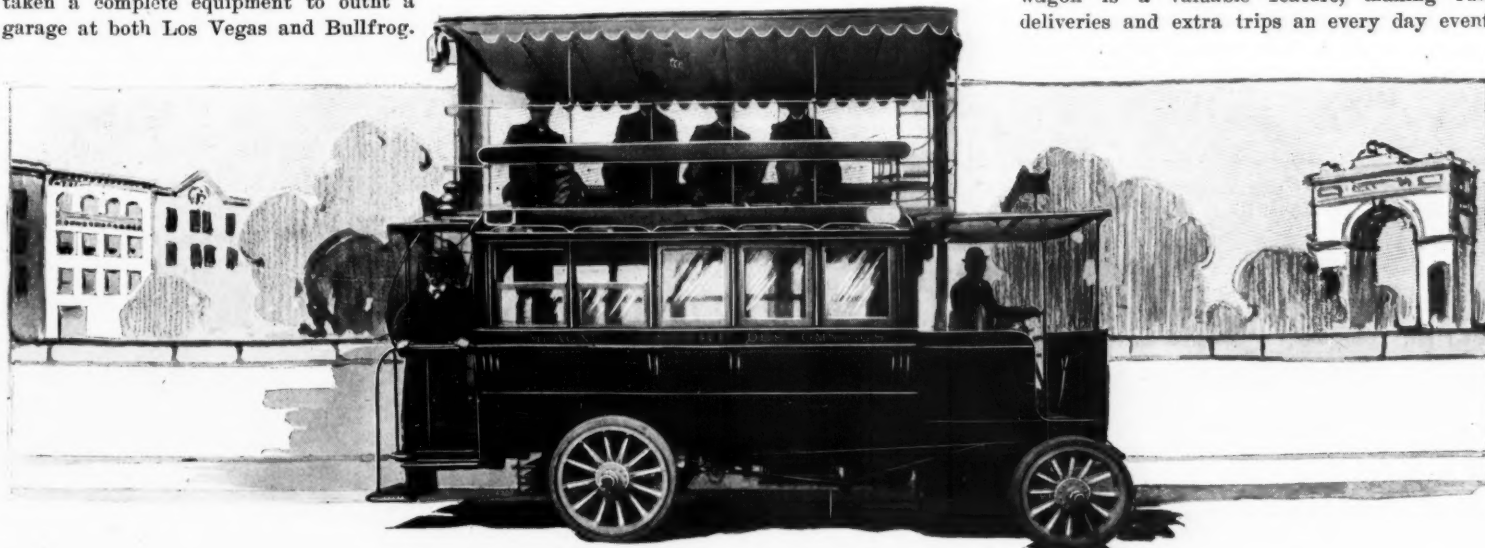
The Compagnie Generale des Omnibus, of Paris, decided long ago that it would some time replace all its horse-drawn vehicles by motor cars. This transportation company employs several hundred omnibuses and horses and has finally decided to purchase 110 motor buses, as a starter, expecting to have at least 300 such vehicles in use within 3 or 4 years.

Tests are now being made with a new 40-horsepower Gardner-Serpollet steam omnibus. The vehicle seats fourteen persons inside and

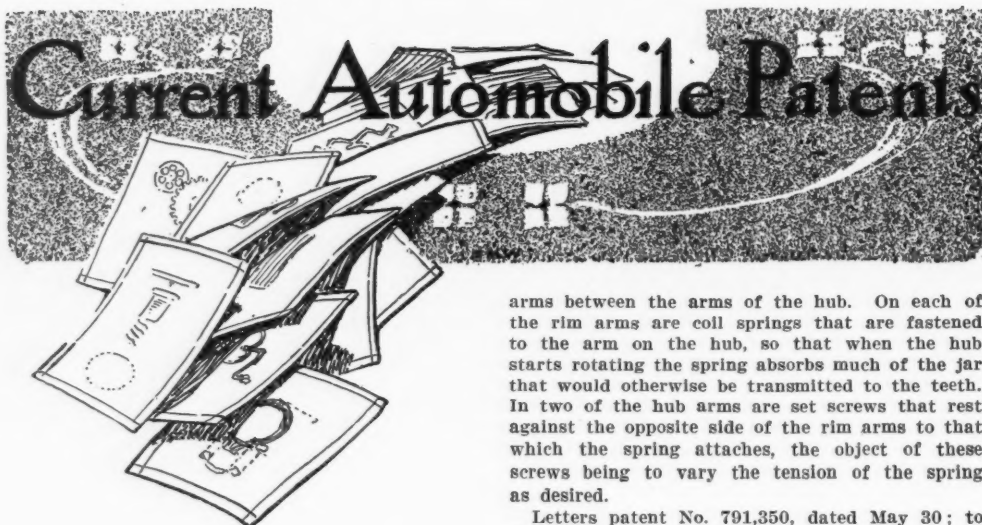
fourteen on top. There is also room for two persons on the front platform near the driver. The chassis is made of steel armored wood. The vehicle weighs 7,700 pounds when empty. The engine is connected with the driving wheels by chains and through an ordinary differential. A special device enables heat to be furnished to the generator in proportion to the quantity of water delivered by the pump. There is an automatic device which regulates both the water and kerosene pumps. This device works as soon as the steam pressure drops below a certain fixed limit, and it stops when the motor ceases to use steam or the steam passes the marked limit. Heavy oil is used as fuel. The car can be driven at an average rate of speed of 6 miles an hour.

WHAT ONE CAR DOES

Smith & Forrest, of Manchester, England, have for over 2 years used a motor wagon, with at times a trailer, that has traveled in that time 10,000 miles and hauled about 6,000 tons. The wagon is used in delivering oils over daily routes to surrounding towns and cities 10 to 25 miles distant, and has on several occasions made the run to Liverpool and return. Near Manchester is a V-shaped hill, the steepest one in the district, up which the wagon makes regular trips with over 5 tons of pitch and oil. When the firm commenced using the wagon expenses were large because of the inexperience of the drivers, who abused the motor and all other parts because of ignorance of their power and how they should be cared for. The greatest saving to them in the use of the wagon is that much time is saved in not having to unload between steamboats and the refinery or between the refinery and delivery points. The range of usefulness of the horse with heavy loads is limited to 25 miles daily, but with the motor wagon a country delivery of almost any distance can be made without reloading, without using relays as needed with the horse, and without the wagon remaining away from the plant over night. The extra speed of the wagon is a valuable feature, making rush deliveries and extra trips an every day event.



FORTY-HORSEPOWER, FOURTEEN-PASSENGER GARDNER-SERPOLLET STEAM BUS



Letters patent No. 791,316, dated May 30; to Sydney S. Breese of Southampton and Charles L. Laurence of Bayshore, N. Y.—This invention refers to a combination of radius and strut rods for bracing the front and rear axles of an automobile, together with a simple method of simultaneously adjusting them. From the side part of the frame are two pivoted radius rods that are also pivoted on the axles. The rear rod instead of being pivoted direct on the frame is on a bracket that is pivoted on the frame and from this bracket is a vertical strut rod, from the bottom of which a radius rod runs forward to the frame and another rod runs to the rear axle and has in it a short coil spring. A similar rod connects from the bracket to the front axle. From the bracket a tightener extends to the rear axle, by means of which all rods are tightened or slackened.

Letters patent No. 791,126, dated May 30; to De Lonson E. Barnard of Chicago—The invention refers to a device for governing gasoline engines by locking the inlet valves so that they remain stationary while the remainder of the engine is running. The inlet valves are actuated by a lever movement from a cam shaft driven from the crank shaft. Instead of the valve being operated by a plunger rod acting against the end of the valve stem, as is usual, the motion of opening the valve is transmitted through a spring. The locking of the valves out of action is accomplished by centrifugal governors, which, through a rocking shaft, act on the valves by counteracting the action of the spring.

Letters patent No. 791,180, dated May 30; to Eugenio Cantano of Rome, Italy—This device is a mechanical steering gear for electric automobiles by which the current is partly turned off before the steering gear becomes operative so that the car's speed is automatically reduced when turning corners. On the rear axle are two motors, independently connected with the drive wheels, and so connected with the steering gear that the current to the right motor is reduced when turning a corner to the right and that to the left is reduced when turning a corner to the left. Each motor has field coils either in series or parallel, and shunt coils in parallel, and means to vary the potential at the point of union of the shunt coils by connecting these points with variable points between the terminals of the battery.

Letters patent No. 791,275, dated May 30; to Herbert M. Lofton of Atlanta, Ga.—In a steering gear for automobiles there is on the base of the inclined column, carrying the steering wheel, a conical shaped gear with a spiral worm on its face which meshes with a vertical rack, to the bottom of which is fastened suitable connection with the steering knuckles. The rack works in guides, which are so made to form a bearing for the steering column. In the column is a universal joint for tilting the wheel when entering or leaving a carriage.

Letters patent No. 791,329, dated May 30; to James M. Dodge of Philadelphia—This device is a spring-drive sprocket wheel. The hub and rim are separate pieces; the former has two oppositely placed arms for retaining the rim in position against lateral movement and also two other arms at right angles to these but which do not connect with the rim. The rim, which does not differ from the ordinary one as far as sprocket teeth are concerned, has two inwardly projecting

arms between the arms of the hub. On each of the rim arms are coil springs that are fastened to the arm on the hub, so that when the hub starts rotating the spring absorbs much of the jar that would otherwise be transmitted to the teeth. In two of the hub arms are set screws that rest against the opposite side of the rim arms to that which the spring attaches, the object of these screws being to vary the tension of the spring as desired.

Letters patent No. 791,350, dated May 30; to Roderick Macrae of Chicago—In his storage battery the inventor uses two porous cups of different size, one of which is within the other, both being placed within a metal casing. The inner cup is filled with an active material, the outer cup between its inner walls and the inner cup filled with an electrolyte and active material, being coated over the outer walls of the outer cup and the whole contained within a metal casing or cup, which forms one of the electric terminals. The active material within the inner cup and that between the outer cup and the metal casing are connected with a conductor.

Letters patent No. 791,101, dated May 30; to Elwood Haynes of Kokomo, Ind.—In his carbureter for explosive engines the air entering valve and the fuel entering one have concentric axes and can be adjusted relatively to each other. Air enters at the bottom of the cylindrical casing forming the carbureter proper. Fuel from the tank enters by way of a horizontal passage above the air opening. Above this opening is a rotatable valve controlling the passage of mixture to the motor, the valve seat being slotted, as well as the valve head, the openings are made to coincide by a lever coupled with a governor or steering wheel lever.

Letters patent No. 791,071, dated May 30; to Joseph Bartoski of Pittsburg, Pa.—This device is a rotating motor in which the air-cooled cylinders are placed obliquely to the crank shaft within a rotating casing. In the center of the space, amongst the cylinders, is a stationary crank shaft with a single throw for the three cylinders. On this throw is a three-arm crank, to which is pivoted to each throw a rod, which is pivoted to the connecting rods from the cylinder. At the point where the connecting rod pivots with this rod is a third rod that has its other end pivoted to a stud in the revolving casing. Ordinary reciprocating pistons are used in each cylinder. At one end of the cylinders are inlet and exhaust valves, both inlet and exhaust being connected with the

central crank case surrounding the stationary crank shaft. From the case are further exhaust ports for pipings leading to the muffler and others for pipes leading to the carbureter. The three cylinders are located so that the rods from the three-arm crank are at 180 degrees to one another, giving impulses at regular intervals.

Letters patent No. 791,340, dated May 30; James E. Hadley of Cedar Bluffs, Neb.—The device described is a speed indicator, supposed to be driven from a gear on the road wheel hub or live axle. Meshing with this gear is a vertical worm, with the shaft extending upward and carrying a centrifugal governor. On the shaft above the governor is a runner driven by the governor when it comes into operation, and the runner connects through a bevel gear with a rack geared to a pointer on a dial plate. As the car speeds the governor rises, pushing against the runner and, creating greater friction with it, moves the rack and also the pointer.

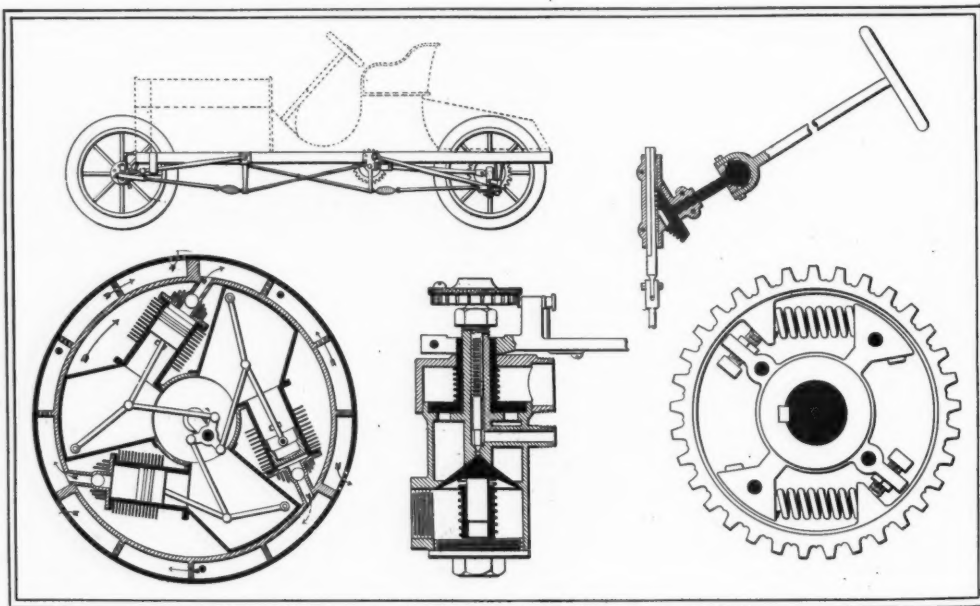
Letters patent No. 791,057, dated May 30; to William G. Todhunter of Plumstead, Eng.—His speed and distance measuring device for attaching to automobiles is combined with a clock mechanism and speeds and distances are recorded on a circular paper ring. Connected with the hour-arbor of the clock is a rotatable frame, to which the paper ring is attached, the frame and ring revolving at the same speed as the arbor. Close to the paper is a prickler adapted to be forced against the paper ring while it revolves and makes perforations in it. On the road wheel or live axle is a gear which drives a worm and on the shaft of the worm is a cam that presses the prickler against the paper ring. There is a spring for forcing the prickler away from the ring. The faster the vehicle travels the oftener will perforations appear in the disk, which, being driven by the clock mechanism, always revolves at the same speed.

Letters patent No. 791,087, dated May 30; to Isidor Deutsch of Montreal, Que.—In a universal joint, of the ball and socket type, the ball is rigidly fastened to a shaft by having a slot in it for receiving the end of the shaft. The ball is enclosed in a socket attached to another shaft axially in line with the one carrying the ball. Through the ball and the socket passes a bolt with nuts at either end, by means of which the motion is transferred from one shaft to another.

Letters patent No. 791,070, dated May 30; to Ira S. Barnett of Louisville, Ky.—In a friction clutch for locking gears or sprockets to revolving shafts, as is needed in individual clutch transmissions, the inventor uses on the shaft a loose metal plate which carries on its periphery the teeth forming the gear or sprocket. On this plate is an annular flange, within which is a split friction ring carried on a part rigid with the shaft. In expanding the ring two crossed levers, curved so as to encircle the shaft, with the crossed arms fulcrumed and their long curved parts attached to the split end of the friction ring, are separated by a wedge movement, which locks the rings with the gear or sprocket.

BRESEE'S RADIUS RODS

LOFTON'S STEERING GEAR



BARTOSKI'S ROTATING MOTOR

HAYNES' CARBURETER

DODGE'S SPRING SPROCKET

CURRENT GOSSIP



Twenty-seven Sold—Trade in Worcester, Mass., is booming. One agent is credited with having sold twenty-seven cars since the beginning of the season.

Mors in New York—Mors cars are handled in New York by E. Lillie, 41 West Fifty-fifth street.

Deal Out Oil—Tatum & Bowen, 36 Fremont street, San Francisco, have been appointed agents on the Pacific coast for the A. W. Harris Oil Co., of Providence, R. I.

Now an Agent—At 202 State street, Traverse City, Mich., a garage is being opened by C. E. Haynes, who has secured the agency for the Elmore Pathfinders.

Sight-Seeing Pays—E. K. Baker, manager of the Kenwood Auto Station, near Washington park, Chicago, reports a greatly increasing demand for rental cars. This garage operates a park trip service.

Demand Increasing—Good business is reported by George N. Nolan, Jr., manager of the Automobile Supply Co., of San Diego, Cal. There is an increasing demand for automobiles in the California town and the surrounding country and prospects are for a very good season.

New Quaker House—Scarcely a week passes without an addition to the colony along Philadelphia's automobile row. Last week's contribution was the La Roche Automobile Co., which has opened spacious show rooms, with garage accommodations and repair shop, at 236 North Broad street. William H. Brines and Maximilian F. La Roche compose the company, which, besides a general garage, storing and repair business, will



BUSH & BUNGE'S GARAGE

handle the Wolverine Chainless in eastern Pennsylvania and southern New Jersey.

Shop in Redlands—A garage and repair shop was recently opened in Redlands, Cal., by C. C. Sidwell.

Has Big Line—George A. Crittenden, lately associated with A. R. Bangs, of Boston, has started in business for himself in Lynn, Mass., and will have the agency for the Franklin, Baker electric, Darracq and Panhard cars.

Ready for Business—L. H. Smith and L. H. Bean, of Worcester, Mass., have gone into the automobile business under the name of Smith & Bean. The Jackson car will be handled by the newcomers, who have located at 38 Exchange street.

Extensive Garage—Nearly \$60,000 will be spent for the garage which the Rarig Automobile & Garage Co. will erect on Folsom street, San Francisco. A lot 63 by 165 feet was purchased for \$30,000 and a similar amount will be spent in the building of the garage.

New Los Angeles Garage—Bush & Burge have recently started a garage and repair shop at the corner of Seventh and Main streets, Los Angeles, Cal. While not one of the largest garages in the city it is one of the best equipped, the machine shop being 30 by 60 feet and so arranged that big jobs can be handled. The members of the con-

OF THE GARAGES



cern have been practical mechanics for many years and are among the veterans in the automobile line in Los Angeles.

Buick in Detroit—J. P. Schneider, of Detroit, Mich., has secured the local agency for the Buick cars.

Berliet in America—The American agent for the Berliet car, made in Lyon, France, has opened a salesroom at 219 West Fifty-eighth street, New York. The agent is Mendel, Dale & Co.

Little Combine—The automobile dealers of Los Angeles recently organized the Associated Automobile Dealers of Southern California, an association whose object is to uphold prices and establish better relations between the various dealers. William K. Cowan, agent for the Rambler and Waverley electric, was elected president of the trades association.

Several New Agents—The Jackson Automobile Co., of Jackson, Mich., recently appointed the following new agents: L. C. Howard, 308 West Fifty-ninth street, New York; Monroe Automobile Co., Rochester, N. Y.; C. R. Dench, Erie, Pa.; Sioux Falls Auto & Supply Co., Sioux Falls, S. D. The last named company has the state agency in South Dakota.

New Knox Garage—S. A. Miner, the Knox agent in Hartford, Conn., is to have a fine new garage, plans for which are now being drawn. It will be the largest and most convenient station in the east and will be three stories high. An elevator taking two of the longest cars at a time will connect the floors and a machine shop will be run on the top floor. The location will be one of the finest in Hartford and work is to begin at once.

THE READERS' CLEARING HOUSE

PROTECTION FROM RUST

Brooklyn, N. Y.—Editor MOTOR AGE—Can you give me a mixture for painting steel and iron surfaces to prevent rust? The salt ocean air has caused the fly wheel and exposed parts of my motor to rust.—E. C. B.

Paint the parts with a nearly saturated solution of chloride of tin. After 12 hours wipe this off and apply another coat. Three applications will be found necessary. After once removed, paint the surfaces with an ointment of corrosive sublimate and lard. This ointment is used as a gun band protection, when the salt air is liable to form rust.

CORRECT TIRE SIZES

Waterloo, Ia.—Editor MOTOR AGE—What size tires should be on a 1,600-pound car? I am building a car and the sizes given me by friends who should know vary so that I decided to write you.—C. C. WATTS.

Outside of the weight of the car there are two quite important points to consider. One is the maximum load to be carried and the other the power of the motor. It is apparent that with a 6-horsepower motor in a 1,600-

pound car the strain of traction would be much less than if the car were equipped with a 24-horsepower motor. With a 1,600-pound car equipped with a motor not over 16-horsepower a tire section of 3½ inches on a 30-inch diameter will answer satisfactorily, and still permit of a maximum load of 2,400 pounds.

CAUSES FOR STOPPING

Flora, Ill.—Editor MOTOR AGE—My machine is completely out of commission and refuses to start. Can you suggest the trouble? The last time the motor was run it stopped quite suddenly and I have not been able to get it to go. As there are no automobiles in this part of the country your assistance will be appreciated.—T. W. W.

The stoppage of the motor might be caused by many things—valves sticking, valve springs broken, loose wires in the ignition circuit, sooty spark plug, lack of gasoline, accumulation of dirt or water in the gasoline, broken spark plug porcelain, gasoline valve jarred closed, shifting of the cams, mixture changed, poor compression. There are so many things

that might cause this that MOTOR AGE merely makes these as suggestions for the most probable trouble sources.

BOAT BUILDING LINES

Kenosha, Wis.—Editor MOTOR AGE—In the boating journals the "lines" of launches are shown in various forms. Can you state what is a "body plan" and what is a "sheer plan?"—E. R. C.

Assume we have a boat of a certain model. If this hull were to be cut by parallel, horizontal planes and these intersections be laid down on the designing boards, there would be what are known as the "water lines." If this hull were cut by transverse vertical planes and these intersections laid down, the sheet would then consist of "sections." Usually in showing sections those from amidship aft are shown on one side and those from the same point forward on the other. This is known as a "body plan." The "sheer plan" is a side elevation showing the lines when vertical planes are passed longitudinally through the hull, from the keel to the gunwale and vice versa.



MIDGETS TAKE TO AUTOMOBILING

First Big one—The greatest automobile parade Colorado Springs ever saw was held Decoration day, when about fifty cars toured the principal thoroughfares of the city.

Big Load, Long Trip—A French truck carrying a load of 11,000 pounds was recently driven from Bordeaux to Paris, 385 miles, in 54 hours, an average of 7 miles an hour. There were no accidents.

Saves Half Time—Thomas Bailey, a rural mail carrier in Vincennes, Ind., has to cover a route of 25¼ miles, where there are 110 residents. By horse and wagon it required an average of 5½ to 6 hours, while since using his steam car, the carrier covers the same road in 2 hours 20 minutes.

A Lucky Steamer—Dr. B. P. Johnson, of Chicago, who is visiting in Honolulu, Hawaii, has purchased a White steamer with which he intends to tour the islands. He will remain until August and then go to Japan, and after a brief visit to the land of the mikado he will start for Cairo, Egypt. He will take his White with him through these countries.

Militia to Use Cars—An effort is being made to establish an automobile corps for service at the coming military maneuvers in Massachusetts. All the troops of the state are to camp together for the first time in a period of 20 years. It is thought the use of automobiles will be a great success and several White and Columbia cars will surely be used.

Motor Union Grows—The Motor Union of Great Britain had 7,255 members the first of this year. On the same date last year its membership was 5,136, while the year before it had only 3,088. In 1903 the union had only one associated club, while at the end of last year it had forty. There are 325 ladies of the Ladies' Automobile Club of Great Britain and Ireland, which is affiliated with the union.

German Motor Cycle Exports—The exportation of German motor cycles is rapidly increasing. During the first three months of this year 390 motor cycles valued at \$79,500 or an average of \$204 each were exported. In 1904, during the first 3 months the exports were valued at only \$53,000 and during the corresponding period in 1903 at \$25,000. The importation of foreign motor cycles is rapidly decreasing. In 1903, during the first 3 months,

the value of imported two wheelers was \$15,000; in 1904, \$37,700, and this year \$18,250 worth has been imported.

Gobron-Brillies in London—The Gobron-Brillie British Motor Co., Ltd., was recently organized in London, with a capital of \$150,000. The company is to acquire the British rights to make the Gobron-Brillie car.

Rich on General Principles—According to a motorist of Providence, R. I., automobilists are subject to all kinds of overcharges in that city. If a plumber finds out that he is doing a soldering job for an automobilist he charges twice or three times the ordinary price, and charges in other lines are similarly made.

Hauls Eggs in Automobile—H. Ridgely, an egg farmer in Harrington, Del., is using an automobile to carry eggs to the railroad station. He claims horses have often been the cause of losing heavily on account of becoming frightened, stopping suddenly or balking. Ridgely handles 12,000 dozen daily.

Murderer Escapes in Car—The police of Buffalo are searching for a murderer who is supposed to have driven to Buffalo from Erie, Pa., in an automobile. The man killed Detective Griffin of Erie last Friday morning. He escaped on a train but alighted a few miles from Erie and entered a motor car driven, evidently, by two of his friends. The



NASHVILLE'S PARADE—DR. AND MRS. BOGLE

party headed for Buffalo and the police there were warned to watch for the man who had adopted this modern way of escaping the minions of the law.

Speeding Promised—An automobile speedway will be built from Venice to Los Angeles, Cal. A company was organized with a capital of \$50,000 for the purpose of starting immediately the building of the road.

Now, which?—George Smith, who owns the Utica pike, near Jeffersonville, Ind., had a poster placed at the toll gate at the Jeffersonville end of the road, which read as follows: "Automobiles, 10 cents per hour per mile."

African Endurance Run—Ten motor cars started in the 125-mile endurance run which the Automobile Club Oranien, of Oran, Africa, held May 7. First prize was won by a 12-horsepower Boyer, which covered the distance in 4 hours 14 minutes. A 12-horsepower Chanut was second, followed by a 9-horsepower Boyer and three Delahaye cars.

Show Small Gain—During April last the exports of automobiles and parts were valued at \$237,462, which is a gain of \$704 over those of April a year ago. During the 10 months ending April, 1905, the total value of these exports was \$1,876,063, as against a value of \$1,542,535 for the same period of 1904 and \$894,521 for the 10-months' period of 1903.

Portable Bail Bonds—The latest convenience for automobilists who live in places where they are subjected to arrest for infractions of speed laws, is a block of bail bonds. When arrested all that is necessary is to fill out the bond and hand it to the magistrate. They are really powers of attorney, run for a year, and if not used may be redeemed at \$5, providing not over three are returned. The book of five costs \$25.

Trying Oil for Roads—Over a hundred members have been added to the roll of the Minneapolis Automobile club during the last few weeks. The club has issued a booklet, containing the names of the owners and numbers of all of the 800 cars licensed in the city, and has had prepared road maps, showing all the roads within a radius of 30 miles of Minneapolis and St. Paul. These have been furnished to the members free. President Joyce is now preparing to make an extensive experiment with crude oil for improving the roads. He is corresponding with an oil company, and it is believed enough oil can be secured from Kansas at the cost of freight to conduct experiments similar to those which have proven successful in California.

Battle of the Flowers—Nashville has just held its annual flower parade, and while it was arranged by the Retail Merchants' Association and included all sorts of vehicles, the automobiles easily were the center of attraction. There were twenty machines in the parade and as a total of \$150 had been offered as prizes for decorations the competition in this line was strong. The first prize fell to Mrs. J. Cleves Symmes, whose car was elaborately decorated with 2,700 roses and trimmed with smilax, white ribbons and artificial butterflies. Joseph Warner took the second prize and the third went to Miss Shirley Cummings, whose car was decorated with pink and blue morning glories and which was further set off by a bevy of beautiful southern belles attired in white. As a matter of fact, on the first ballot of the judges,

Miss Cummings received the vote of honor, but on subsequent ballots she lost to Mrs. Symmes. The affair has done much to interest people in automobiles, and similar parades are being considered.

Motor Parade Opens Ball Season—The opening of the base ball season in Syracuse was marked by an automobile parade. The mayor and several others in automobiles headed the procession and the mayor threw the first ball across the plate.

Woman Doctor Motorist—Dr. Edna T. Matthews, of Dayton, O., is the first and only woman physician in the state to use an automobile in her practice. It is claimed she is the first woman doctor in the United States to use a motor car in her profession. The car, a Haynes-Apperson runabout, has been used over a year and was never in a repair shop.

Big Car, Little Man—Ernest Romer, with Barnum & Bailey's circus, is probably the smallest and lightest automobile driver in the world, for his age. The little man is 20 years old, weighs 48 pounds, and is 26 inches tall. A few weeks ago he was taught to drive a Pope-Tribune car and within 10 minutes handled the rig in Fairmount park, Philadelphia, while a large crowd watched the performance.

Tri-Car Competition—L'Auto, of Paris, is promoting a competition for tri-cars. The contestants will have to cover a distance of 100 kilometers in 5 hours without driving more than 18½ miles an hour. During the run there will be a hill-climb and a speed contest over a distance of 1 kilometer. Each tri-car must carry two persons, and the weight of the three-wheeler must be between 176 and 330 pounds when empty.

Mixing Politics—Frederick N. Manross, member of the Connecticut legislature and one of the councilmen of Bristol, was acquitted a few days ago by Judge Cooper, in New Britain, from the charge of having driven his car at a greater rate of speed than the local ordinance permits. There was considerable interest shown in the case, as it is alleged it was the outcome of a political plot. The charge could not be proven by the accusers.

Franklin at Head—H. H. Franklin, of the Syracuse Automobile Club, has been chosen to head the membership committee of the New York State Automobile Association and has appointed C. Arthur Benjamin as vice-chairman. At the next meeting of the board of directors of the association it is expected that Watertown, Medina and the Chatteragus county clubs will be admitted to membership. Two clubs formed in the vicinity of New York city will also be taken in.

Was Great Attraction—George W. Peavey, the millionaire grain man of Minneapolis, stood before the bench in the police court of that city last week, and meekly paid a fine of \$1 for running his automobile without the formality of displaying a number on the back. Mr. Peavey had just purchased a Pierce Great Arrow from the C. P. Joy Automobile Co. of St. Paul, and had run the car home, so that he could license it in Hennepin county. He was dutifully headed for the boiler inspector's office in Minneapolis when he was held up by a bluecoat. Explanations availed nothing, and when the arrest was



made known, half of the members of the chamber of commerce adjourned across the street to the city hall, to see the grain man in police court.

Escorted by Automobiles—Governor Hanly, of Indiana, was escorted by forty automobiles, belonging to members of the Wayne County Automobile Club, who acted as special escort during his journey from Richmond to Bethel, where the chief of the state pronounced the Memorial day address.

Novel Reliability Run—The Long Island Automobile Club, of Brooklyn, has arranged a club run to Southampton, L. I., and return, a distance of 180 miles, which has been given the name of economy prize tour because a special prize will be awarded to the member of the club who makes the entire tour at the least expense for fuel, lubricant and repairs. The basis of charges has been established as follows: Gasoline, 25 cents per gallon; lubricating oil, 60 cents per gallon; time on motor or general repairs, 60 cents per hour; time on tire repairs, 50 cents per hour per person; punctures or blown out inner tubes, 75 cents each; shoes punctured or blown out, no charge; time to replace inner tubes or inflate, 50 cents per hour; new parts, catalogue prices; chain repairs, catalogue price for links, and 50 cents per hour. The route chosen will be from Broadway to Jamaica, thence on the Merrick road to South county chosen will be from Brooklyn to Jamaica, to Massapequa, thence east by way of Mer-

rick and south county roads. Each car must have a full quota of passengers, and the members or drivers will be their own observers on the trip.

May Use Road—Negotiations for the right of way of the carriage road up Pike's Peak are under way and the use of the road is practically assured. The snow on the mountain is now fast disappearing and the road will be put into shape at once.

One-Third Electrics—According to a recent census there are ninety-eight cars in Rockford, Ill., of which number thirty-two are electrics of five makes, while the sixty-six gasoline cars represent the goods of twenty different makers. There is only one imported car in the town.

Chief to Have Car—Minneapolis is to have an automobile fire wagon, for the use of Chief Canterbury. Bids were asked for some time ago by the city council, and the master mechanic of the department recommended that the Winton bid be accepted. The automobile service for the chief will be established at once.

Prince Chief Mogul—Twenty members of the German army automobile volunteer corps recently drove from Berlin to Hamburg. Prince Henry led the automobilists into Hamburg, where they took part in a parade and other exercises at which the prince was prominent and which were witnessed by several thousand spectators, who lined both sides of the course and cheered loudly as the motorists passed.

Writing a Book—Sigmund Krausz, manager of the foreign department of the H. H. Franklin Co. of Syracuse, has completed work on a dictionary of automobile terms containing three departments: English-French-German. It contains 12,000 technical terms and words employed in connection with motor cars and motoring. The book is for use in the office and factory and in making tours.



BATTLE OF THE FLOWERS—MISS CUMMINGS AND PARTY

AMERICAN MOTOR LEAGUE

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National Headquarters
Vanderbilt Building New York



THIS LEAGUE

Is Now Collecting Route Information

covering all automobile routes in the important states and will publish road books for motor car users as fast as complete information is received. The A. M. L. is the only organization engaged in this work, and it invites the co-operation of all persons interested. For full information and membership blanks address American Motor League, Vanderbilt Building, New York City.

APPOINTMENTS MADE

The following named members have been added to the road book committee in their various states: Alabama—S. S. Falkeneau, Birmingham. Connecticut—Fred B. King, Bridgeport; Cyrus Kelsey, Waterbury; T. F. Marsters, Meriden. District of Columbia—Alexander A. Porter, Washington; Norton Olson, Washington. Delaware—Merritt Saxe, Dover. Georgia—Ethan Fennell, Savannah. Kentucky—J. R. Mason, Louisville. Louisiana—Emmet Sadler, New Orleans. Michigan—T. D. Paxton, Grand Rapids; L. F. Rowley, Saginaw. Massachusetts—C. C. Thorpe, Lowell; Jason Kent, Holyoke; Arthur Fosdick, Boston; V. M. Strong, Pittsfield; Roger Murcheson, Springfield. Missouri—Martin Telford, St. Louis; S. T. Calvin, St. Louis; Albert Torrey, Jefferson City. New Hampshire—J. S. White, Portsmouth; Thomas Ames, Manchester. New Jersey—M. M. Conrad, Camden; Ralph Eighmie, Passaic; E. Selby Bixby, Paterson. New York—J. M. Nostrand, Syracuse; Charles A. Cole, Buffalo; N. N. Fowler, Ithaca; Peter A. Corwin, Albany; Thomas Sedgwick, New York; John A. Trotnow, New York. Ohio—Arthur A. Grover, Cleveland; Neal Gilmore, Cincinnati. Pennsylvania—Bert C. Kamp, Philadelphia; Charles R. Leavenworth, Philadelphia; E. V. Dexter, Mauch Chunk.

CONSULS TO BE NAMED

The league needs at least one good representative in every village and city where automobilists are to be found, one who will do a little active work in bringing the work and objects of the league to the attention of others and who will aid the secretary in his efforts to enlarge the membership roll. From members of this class a number of consuls will be appointed, and it is now requested that all motor car users who believe in building up an active and useful national body will send their names and addresses to the league at national headquarters. Consuls are selected from members whose ability, judgment and influence may be relied upon to guide and manage the affairs of the league. In these pioneer days of the motor car the A. M. L. needs the advice and support of its wisest and most experienced members, for without this support its growth cannot increase, or can its usefulness be established. At this time a consul's duties are neither difficult nor exacting. A few minutes' reading will inform him fully as to the nature, object and benefits of the league, and at convenient times he is expected to mention the organiza-

tion to his friends and to invite them to become members. He should remember at all times that the league's power and usefulness are determined by its numerical strength. Without a substantial membership it can have no influence upon legislation; its ability to secure good roads, to erect guide boards and to publish tour books and maps is impaired, and its importance in every substantial particular is minimized. In the efforts of a consul to increase the membership it is important to bear in mind—1. That the only reliable and effective way to obtain applications for membership is by personal invitation; each consul should himself secure the application and forward it to the secretary. 2. That the indiscriminate handing out of membership blanks, or sending them by mail or by messenger, is a most unreliable and often a fruitless practice. It is shown by long experience that twenty new members can be had by the personal request or invitation of a friend or acquaintance more readily than one can be had through any other means. Many persons feel that they ought to join the A. M. L. and really intend to do so; but being engrossed in important personal affairs they put it off until the subject is forgotten.

After five or more members are secured in any town or city, the time is ripe to form a motor club. Let it be noted here that the term motor club is used. This may be another name of what is commonly called an automobile club, but without intending the slightest disrespect it may be said that the average automobile club has yet to give evidence of its usefulness. Its members do not attend club meetings, many of them lose interest in a club which does nothing, and their names are soon lost from the active roll. To make sure that this story is not overdrawn let the reader ask the secretary of the nearest automobile club what proportion of its members were present at the last regular meeting, and whether the club shows a proper enthusiasm in driving the work laid down for it in the by-laws. Of course it is not to be said that all automobile clubs or club members are useless or indifferent, but what is here written is true in its mildest sense of the great majority.

A motor club can be formed on the simplest plan and be managed entirely according to the will and judgment of its members. As soon as such a club is organized it shares with

the league by receiving a portion of all league dues paid by all members—and all applicants for membership—in the state where the motor club is located; the money given back to the local club, being used by it for local purposes, including the putting up of guide boards, danger signs, etc. A small pamphlet on the subject of local organization is sent to each consul and to every inquiring reader of this page who will take the trouble to send for it. Let all members and readers who believe in this effort and are willing to help it along send their names and addresses to the secretary at the address printed at the top of the page.

ROUTE BLANKS

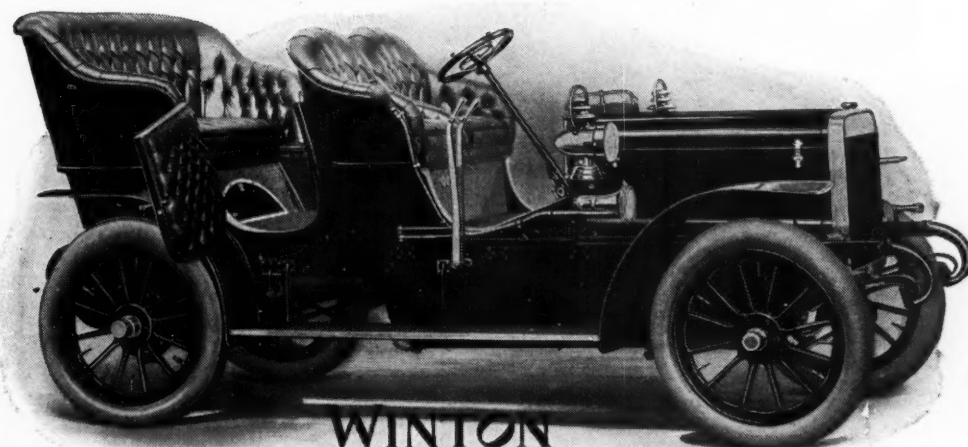
Ten thousand route blanks have been sent out by the secretary and route descriptions have been requested of motor car users in every state. The number of returns is substantial but not sufficient. The secretary receives five inquiries from tourists who need information to one letter from a member who is willing to contribute a route description in his locality. During the last week twenty-two requests have been received for road books of twelve different states. To prepare, print and distribute a fairly decent edition for each of these states would cost an aggregate of about \$35,000 for the twelve. The league is working steadily and diligently, but its income must be received from its members and its members and its maps and road books can only be made right, if made at all, by the combined efforts of many. The little circular "How to Describe a Route" and a route slip will be sent to any person writing for the same, and the secretary welcomes every letter from a member who shows an interest in the progress of the road book work.

GUIDE BOARD STENCILS

A number of guide board stencils will be received at headquarters during the present week, and will be sent to consuls and motor clubs engaged in the work of putting up guide boards. Specifications for the making, painting and putting up of guide boards and caution signs will be sent to any reader on receipt of postal card request.

The number of applications for protection disks is increasing from day to day and the present supply will soon be exhausted. A circular describing this disk and explaining how it protects the motor car user from theft and from assault will be sent by the secretary to any address sent in for that purpose.

WINTON



QUALITIES THAT SATISFY

are contained in every 1905 WINTON, irrespective of size and price. Otherwise, the buyers of these cars would not voluntarily write letters of commendation such as these:

A 40-50
H. P.
\$3500

My Model A WINTON is a success. Has the power for our hills. The transmission is efficient and easy to throw in. I am satisfied in every way.—Mr. Geo. B. Hawley, Cincinnati.

B 24-30
H. P.
\$2500

I ran our Model B WINTON 1000 miles over country roads in six days without a balk. It is a revelation to me. I never ran a car that could equal it.—Mr. H. H. Childs, Williamsport, Pennsylvania.

C 16-20
H. P.
\$1800

My Model C WINTON has run 1300 miles and is giving entire satisfaction. Its simplicity of control relieves the driver from all strain and adds greatly to the pleasure of motoring. The accessibility of all motor parts is another desirable feature. The non-destructible transmission gear has worked perfectly.—Mr. C. S. Maddock, Trenton, N. J.

The ease of Winton operation, the accessibility of Winton motor and transmission parts, and the stability of Winton construction can be secured *only* when you buy a Winton.

*Catalog No. 2 describes all models in detail.
Let us arrange a demonstration for you at our agency nearest you.*

THE WINTON MOTOR CARRIAGE CO.
CLEVELAND, OHIO, U. S. A.

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AUTOMOBILES DE DIETRICH & CO



Where a de Dietrich 1905 Model with a 12-inch Clearance Can Go

THE ONLY FOREIGN CAR MADE
FOR AMERICAN ROADS

20, 30, 40, 60, 80, 120 HORSEPOWER
EARLY DELIVERY

DE DIETRICH AMERICAN BRANCH: 215 W. 48TH STREET, NEW YORK

THE ROYAL TOURIST

"True Blue"



32-36 H. P.

GUARANTEED

2650 LBS.

\$4,000

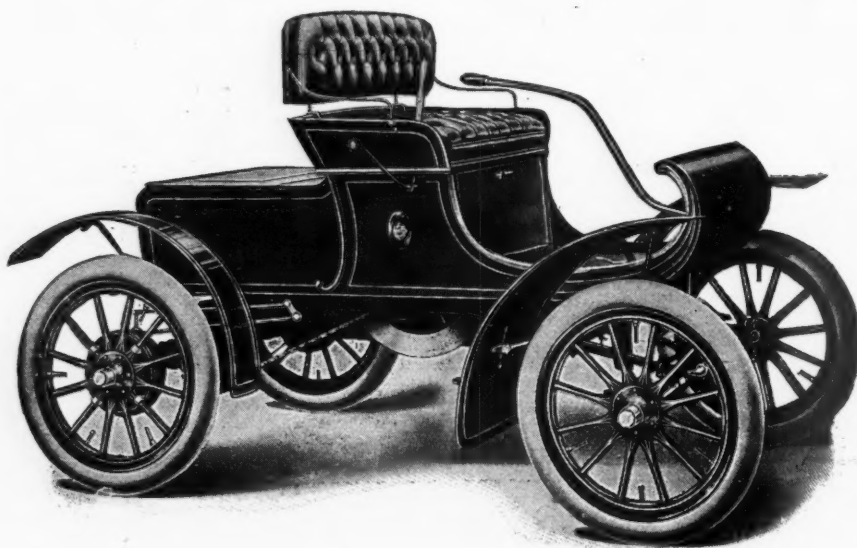
Direct Flexible Shaft Drive—Free Driving Axle—Perfect Throttle Control
—Without Mechanical Governor—Positive Automatic Lubrication of Entire
Motor and Transmission—THE GREATEST H. P. FOR WEIGHT OF
CAR AND 5 PASSENGERS.

WRITE DEPT. 2 FOR CATALOG AND NEAREST AGENCY

ROYAL MOTOR CAR CO.

CLEVELAND, OHIO

*You see them wherever you go
They go wherever you see them*



\$650

Do you want a cheaper car or more value for your money?

It is pretty good business judgment to buy what experience has proven will yield dividends on the amount invested. When you pay \$650 for an Oldsmobile Runabout you buy the greatest value for your money—the greatest dividend payer offered in automobiles to-day. You buy an improved machine in every respect. Its new type of side springs is a revelation in improved spring suspension, making it a comfortable car for rough roads as well as smooth. Note the ratchet brake acting on a drum attached directly to the front sprocket that has superseded the differential. Note the new style of external hub brakes. ***Absolute control at all times is essential***—you have it in our cars. In starting, when the relief is open the spark is automatically retarded, so that under no circumstances can the engine back-fire. There are numerous other points, which you will appreciate best by calling on our agent for demonstration. You can easily arrange for demonstration at any time.

If you are interested in a touring car, our 20 h. p., two-cylinder machine at \$1,400 is an attractive proposition. It meets every requirement for family use. It has style, endurance, speed. It is easy riding and commodious. Write for Catalog 52, giving full particulars of our complete line of cars.

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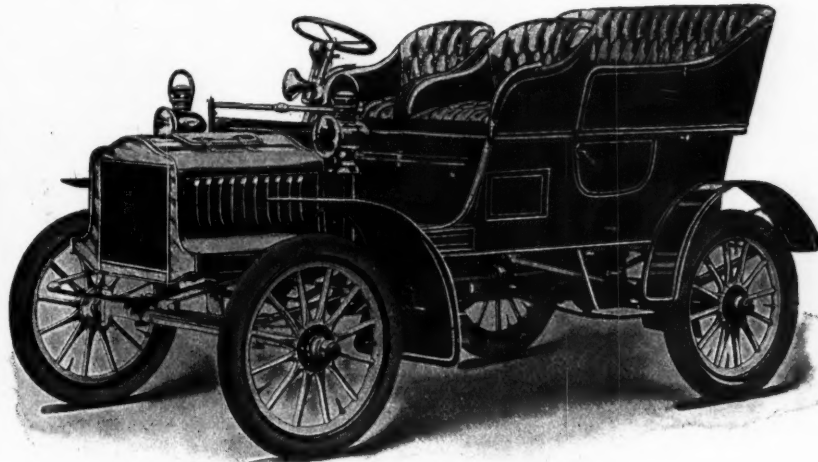
Detroit, U. S. A.

Member Association Licensed Automobile Manufacturers.



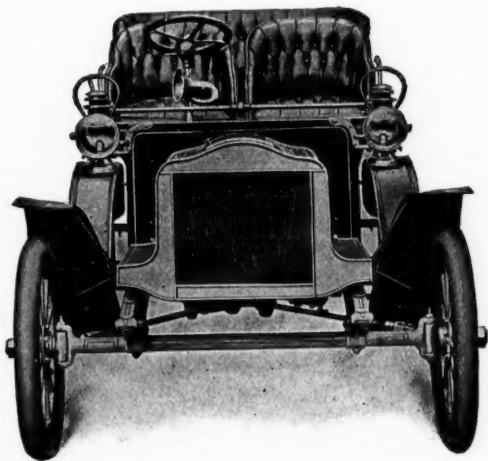
THE QUEEN

MODEL E
COMPLETE
\$1,000



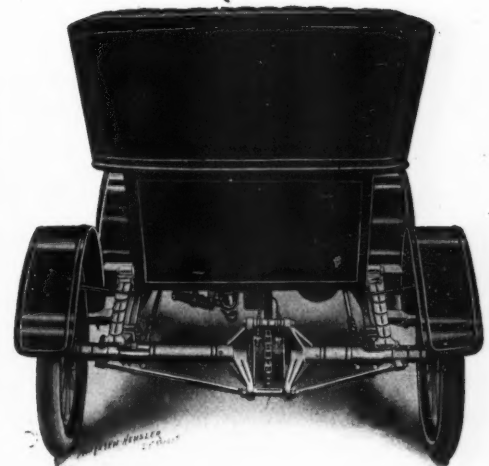
SEATS FIVE
DOUBLE
SIDE DOOR
TONNEAU

ALL SPEEDS ON ONE LEVER



We furnish Two Lamps and Horn

18 ACTUAL H. P.
TWO OPPOSED
CYLINDERS
1600 LBS.
3 to 40 MILES
PER HOUR



Finished in Royal Blue with Cream Running Gear

PRICE COMPLETE - \$1,000

AND WE CAN GUARANTEE

PROMPT DELIVERIES

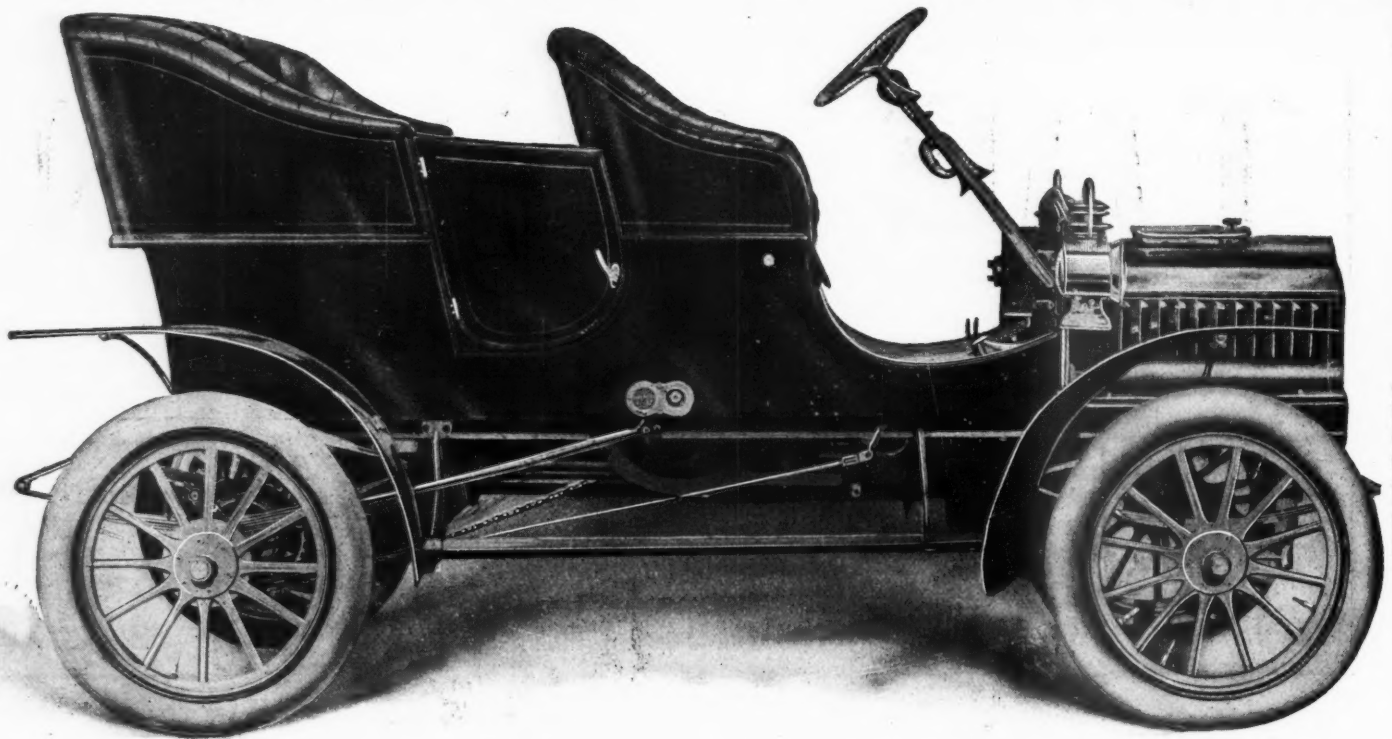
Your Catalogue is waiting for your address

C. H. BLOMSTROM MOTOR CAR COMPANY : : : : DETROIT, MICH.

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CHICAGO AGENT, Harry Branstetter, 1466 Michigan Avenue.

PHILADELPHIA AGENT, The Motor Shop, 317-9 North Broad Street.

BOSTON AGENT, F. E. Wing Motor Car Co., 66 Stanhope Street.
DENVER AGENT, Mathewson Automobile Co., 1420-22 Court Place.



The Ford Model F, Price \$1200

In addition to Henry Ford's originality of design there is more actual value of material and workmanship in FORD MODEL "F" than in any other automobile ever built at the price.

It seats five people, climbs hills on high speed, has a roomy side entrance tonneau, is light, strong and rides like a Yacht. Has the latitude of speed on the high gear of a \$5,000.00 car.

If you are thinking of buying a \$700 or \$800 car, put a few hundred with it and get a Ford Model F. If you think a \$2000 to \$2500 car is necessary, save \$800 to \$1200 and buy a Ford Model F.

We have made Model F so good that it pays the first man to add a few hundred to his investment, and is good enough for the man who is willing to spend more. That was the idea in building the Model F; to give the car so much quality and build it in such quantities that we could make a price that would appeal to the greatest possible range of buyers.

People are going to get out of the idea of buying a new car every year. That is an absurd proposition. Who would think of buying a new carriage every spring? You are entitled to a car that will last you for many years.

It is time for the Automobile business to settle down and give the Automobile buyers real value for their money.

However, most people have not learned how to buy an Automobile yet, just as most builders have not learned to build them.

Model F will be a good car next year, the year after, and years after that. It will not be out of date or out built for a great many years. *It is the boiled down experience of results obtained from thousands of successful cars.*

Model F has the stuff in it, the common sense, the power, the satisfaction, to meet the requirements of any ordinarily conservative man, for years. It has power to go anywhere. It has room and comfort. It is light and economical in maintenance. It is not too big for a handy runabout

nor too small for a comfortable touring car. It has the best workmanship and material that money can buy.

We do not try to make it look like a millionaire's touring car, but it acts like one in all but the expense of maintenance, and it is good enough for any millionaire in the world. It has big tires, a light strong frame, a powerful engine. It don't lug around several hundred pounds of extra weight to wear out your tires, to consume gasoline, and use up power. **It laughs at hills that make the heavy cars clatter and bang on the low gear.**

Mr. Automobile Buyer, keep this in mind. Big Touring Car bodies on cheap, roughly built chasses, will look like you are getting a lot for your money, but new sets of tires at \$160 to \$200 per set, big repair bills, clattering machines struggling with little hills will convince you that something besides bigness of looks is to be considered in buying an Automobile.

How to Buy an Automobile

When you buy a motor car look at all the cars. Find out what they *will do* and *what they have done* in actual service. Get demonstrations on the road. Select difficult roads and steep hills. Don't let a slick salesman spin you along on an asphalt pavement. After you have found what others will do, go to the Ford agent and **ask him to take you out in a Ford.** If it doesn't do as good work as a car costing half as much again, and better work than any car at the same price our agent won't have a word to say. The quality is in the mechanical construction, and when you buy a Ford you are getting the result of Henry Ford's experience and the satisfaction of knowing you have a car that will always do what you ask of it.

Call on our agent. If you don't know who he is write and ask us and get our little booklet on Maintenance and what it costs to run a Ford.

FORD MOTOR CO., Detroit, Mich.

Canadian Trade Supplied by Ford Motor Co. of Canada, Ltd., Walkerville, Ont.

Members American Motor Car Manufacturers Association, Chicago

Don't Experiment—Just Buy a Ford

Delivered Horsepower.

- ¶ We have stated a number of times that the "Three Point Support" of the "Unit" Power Plant in the STEVENS-DURYEA made it possible to get about twice as much of the engine horsepower delivered to the wheels as in any car not so built, and that this "delivered-to-the-wheels" horsepower made the STEVENS-DURYEA a faster road car and better hill climber.
- ¶ Three weeks ago, at the Springfield, Mass., hill climbing contest, we had our first public chance to prove these assertions. We did so by making the fastest time of all the American gasoline cars entered, and they ranged from 20 to 40 horsepower—we also cleaned up three 40 horsepower French cars. We stated then that we expected to make as good a showing every chance we got.
- ¶ Last week we had our second chance, at the Worcester, Mass., contest, and we made good again.
- ¶ They had a hill a mile long, with some portions steeper than 15 per cent. Our regular 20 horsepower car made the trip in the free-for-all event in 96 seconds—about 38 miles an hour—again making the fastest time of all American gasoline cars, not only in this event, but in *every other event run during the day.*
- ¶ We beat the 50 horsepower FIAT by seven seconds, the 40 horsepower Stearns by thirteen seconds, the 40 horsepower Thomas by fourteen seconds, the 35 horsepower Columbia by over twenty seconds, and the 30 horsepower Pope-Toledo by ten seconds. If we had no more than matched the times of these cars of double our horsepower it would be something to crow about, but to have beaten them by from 7 to 20 seconds in the short distance of one mile is a feat that has no parallel in automobile history.
- ¶ Unlike most of its competitors the Stevens-Duryea was not different in any way, shape or manner from our regular 20 horsepower stock car that we have been making so many of. It wasn't stripped, it wasn't geared higher nor lower, the engine was the regular size, valves no larger, compression no higher, same spark coil, same batteries, same carbureter, same heavyweight tires, ordinary gasoline, same everything.
- ¶ The truth of the matter is that we didn't allow ourselves to get all "het up" in the rush to get a four-cylinder car on the market. We knew that the average owner looked with scorn on any car that hadn't at least 30 horsepower, but we figured that there was something wrong if a one-horsepower engine on a bicycle could carry a man fifty miles an hour, yet forty times as much power was required to do the same thing with only four times as many people in an automobile. We soon found the cause to be that other cars were losing half their power between the engine and the rear wheels—wasting it in friction. We found out where these losses were and what caused them, but it took up three years of hard work to find out how to remedy the trouble.
- ¶ Our remedy is the "Unit" Power Plant, supported on "Three Points." By this construction we get over 90 per cent of our engine power delivered to the wheels, as against about 50 per cent on other cars, and as our system of design reduces the car weight so much, this means that we are getting a delivered-to-the-wheels-horsepower for every 90 pounds car weight, as against 150 to 200 pounds on all other cars. Our engine is $3\frac{7}{8} \times 4\frac{1}{2}$, with 80 pounds compression—the utmost it will develop is not over 23 horsepower. It is self evident that our claim to "get more power to the wheels" must be true or the car could not do what it does do.
- ¶ Of course we know that you know that speed isn't everything—that a fast car isn't necessarily a good car. The point we are hammering on is not that of speed only, but that the Stevens-Duryea is a more durable car, a simpler car, a car on which tire trouble is completely eliminated, a car that is better adapted for country tours than any other four-cylinder car in the wide world—that the "Unit" Power Plant, the "Three Point Support," and our new type of "Multiple Disc" clutch, by which these results are made possible, are three of the biggest improvements that have been brought out in the last five years, and that the Stevens-Duryea must produce results that the public can't find in other cars, or our factory, which is the largest in the East, wouldn't have been running day and night for the last five months.
- ¶ We have a surprise in store for you in our booklet. Such a demand for it that it is now in its third edition.

J. STEVENS ARMS & TOOL COMPANY,

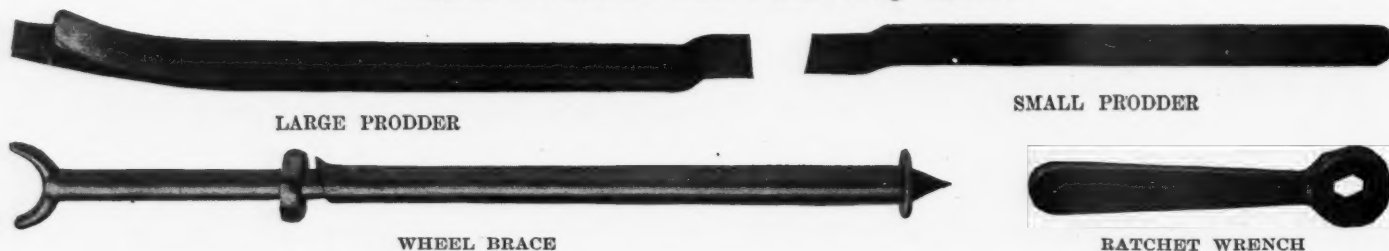
The Twentieth Century Hustler People

705 Main St., Chicopee Falls, Mass.

Member Association Licensed Automobile Manufacturers.

THE NEW GOODRICH CLINCHER TIRE TOOLS

Almost Automatic
Simple, Effective and Positively Quick



Our new tools for applying and detaching Clincher Tires absolutely reduce the time and exertion necessary for the work to that minimum where it is no longer a dreaded occurrence, but instead an easy, quick and satisfying method of performing what has hitherto been a disagreeable task. The ease of manipulation and quick effectiveness of these tools are due in the main to the curved ends and lips of the steel prodders which are made to fit the edge of the wheel rim and engage the tire in such a way that only a few moves are required to force the tire on or off the rim as desired. These steel prodders are in no sense heavy or unwieldy and the operator finds no difficulty in making even initial use of them, after once reading the direction circular and a little study of the illustrations shown therein.

The new wheel brace is simplicity itself—nothing to break, nothing to adjust—sets itself.

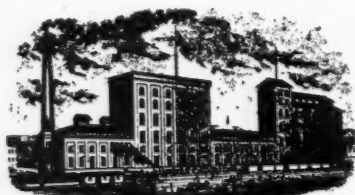
**Prodders, Wheel Brace and Ratchet Wrench Furnished FREE
with Every Set of 1905 Goodrich Clincher Tires**

PRICE - IF BOUGHT SEPARATELY - \$2.75 PER SET

ADDRESS ALL BUSINESS COMMUNICATIONS TO THE MILLS, AND NOT TO INDIVIDUALS.

E M KELLY PRESIDENT

E C ANDREWS SECRETARY



All orders given to Salesmen or Brokers subject
to approval and confirmation.
ALL QUOTATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



Nashville, Tenn. May 22, 1905.

Mess. B. F. Goodrich Co.,
Akron, O.

Gentlemen:

I have your favor of the 12th and in reply will say that the new tools are very desirable indeed; in fact, they simply make the taking off and putting on of a tire a pleasure instead of the much dreaded job as heretofore. I am very much pleased with them indeed.

Very truly,

E C Andrews

THE B. F. GOODRICH COMPANY, Akron, Ohio

Boston, 161 Columbus Avenue
Buffalo, 731 Main Street
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Cleveland, 420 Superior Street
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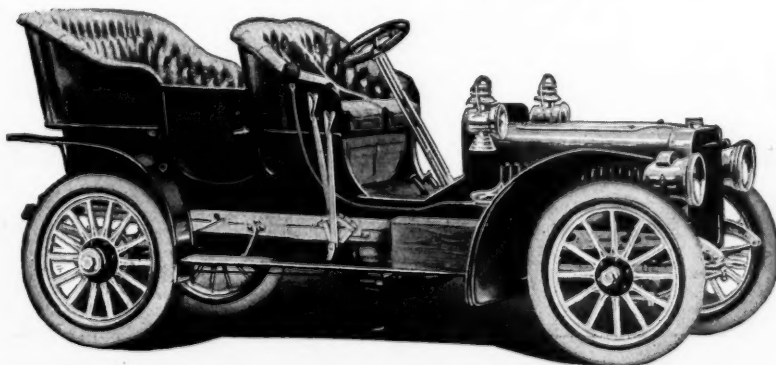
**A Big Comfortable
16 H.P. Car for
\$1250**

THE WAYNE

Model C (shown above) has a 90-inch wheel base, and long, easy riding, half elliptic springs. **This insures comfort.** Weight only 1600 lbs., and the double-opposed cylinders are 5x5. **This insures power.** The motor and fly wheel are hung *under* the chassis frame, making the center of gravity low, thus preventing skidding, and lengthening the life of the tires. **This insures economy.**

A year ago you couldn't buy the equal of Model "C" under \$2,000. It's the biggest value on the market to-day at \$1,250.

Model B is a four-cylinder (vertical) 24-28 H. P. car, 102-inch wheel base, sliding gear transmission, double side entrance tonneau, has fewer moving parts than any 4-cylinder car made.



Price \$2,000

If you want to make agency arrangements which will insure satisfaction to both your customers and yourself, write us. We want the strongest men in the business to handle the Wayne, because it is a strong proposition.

Wayne Automobile Co.
Dept. H : : : Detroit, Mich.

Member American Motor Car Manufacturers' Association Chicago.

New York Agency:
Wayne Automobile Agency, 1659 Broadway

¶ Motor Age is published every week in the year at Chicago.

¶ It devotes itself to live matters concerning the automobile trade, racing, touring and the era of commercial motor car utility which is now born and growing fast. Each issue is profusely illustrated and typographically a gem.

¶ Motor Age will be mailed to any address for one year—52 times—at a cost of \$2.00—an average of less than 4 cents per week.

¶ If you can see where this is a good thing for YOU tear off the lower corner of this page and mail it to us.

¶ DO IT NOW.

Name

Street, No.

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County,

State,

ENCLOSE \$2.00
In any convenient form, stamps, check,
p.o. order or express money order,
AND WE WILL DO THE REST.
MOTOR AGE,
309 Michigan Avenue
CHICAGO

COST OF MAINTAINING A CADILLAC

We have a Cadillac dealer who has sold Cadillacs as long as we have. He offers every buyer a chance to sign a contract to let him keep the Cadillac motor in repair for one year at 50 cents per week. Out of over fifty Cadillac owners in his county he has but one (a man who last year drove a well known two cylinder car) who accepted the offer.

Here's his offer clipped from one of his advertisements:

"I will guarantee to keep any Cadillac automobile, purchased of me, in perfect running order for one year, barring accidents, tire punctures and evident misuse, for 50 cents a week. At the expiration of one year, if you are not perfectly satisfied with your Cadillac and the treatment you have received, I will extend the guarantee one year longer.

"You have doubtless heard tales of the cost of keeping an automobile in repair and in running order, which, if you believe them, would cause you to hesitate and ponder a long time before purchasing a machine. As concerns THE CADILLAC AUTOMOBILE, such stories are ridiculous. I will guarantee to keep your auto, if it's a CADILLAC, in repair and running order for a year's time for only 50 cents a week, excepting, of course, tire punctures and damages resulting from misuse and accidents. Such a fee is nominal. It indicates most clearly the splendid mechanism of the Cadillac, its smooth running and easy operation. My offer that should you at the expiration of one year feel other than perfectly satisfied with your Cadillac and the treatment you have received I shall extend the guarantee for another year, tells you of my perfect confidence in the performance of the Cadillac and the merits of its construction."

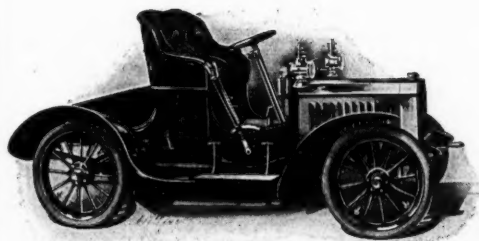
MR. DEALER—If you are not satisfied with the automobile you are handling ask Cadillac dealers and Cadillac owners what they think about the single cylinder Cadillac. It may pay you. Now is the time to begin correspondence for agency.

Cadillac Automobile Company

Members of Association of Licensed Automobile Manufacturers

DETROIT, MICH.

Compound Motor ...Cars



Model 4½, 12-15 H. P., \$1200
Fitted with Detachable Side Entrance
Tonneau, \$1400

THE "QUALITY" RUNABOUT RELIABLE AND ECONOMICAL

Compare our Runabout with other cars selling at the same or a higher price, and you will find that our workmanship, finish and upholstery are unsurpassed. Simple and runs with scarcely any vibration, as our Compound motor is one of the most perfectly balanced motors on the market at present.

Sliding gear transmission, three speeds forward and reverse, and you can start on second speed without any perceptible jerk, in fact, as easily and quietly as with an automobile that uses steam for its motive power.

Another important feature of our Runabout is that there is no odor from the exhaust, as the exploded gases are confined twice as long as in the ordinary type of motor, thus insuring perfect combustion.

The body, fenders and hood are of aluminum, and the frame of pressed steel.

Every part, no matter how small, is numbered, and this, taken together with the fact that the Compound Runabout is "built right," "runs right," and, best of all, "stays right," makes it the true "Quality" Runabout of the present season.

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Brooklyn:
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172 Parkside Ave.

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John B. Herreshoff.

Syracuse:
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Classification Distinctive... WHY?

The Lightest, the Strongest, Most Durable, Most Efficient, Best Finished. Attractive in Rich Finish and Design, Simply Manipulated.



Absolutely Safe, Perfectly Clean, Best to Ride, Most Economical to Keep. Always Satisfactory. A Carriage Any Lady Can Drive.

THE BAKER ELECTRIC

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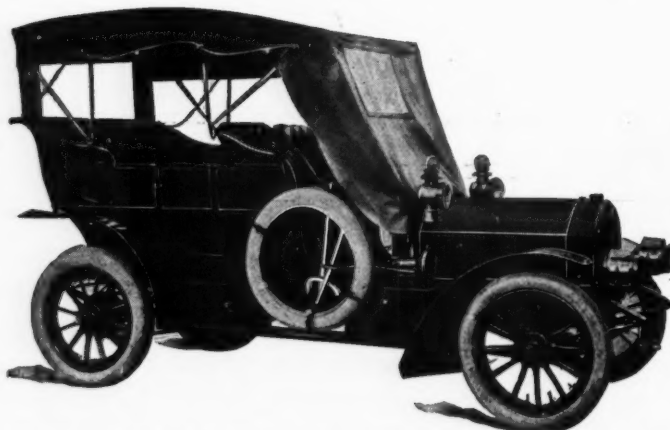
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Chicago Agents: PARDEE-ULLMANN CO., 1400 Michigan Avenue, Chicago

APPERSON

30, 40, 50 Horsepower Cars, carrying five or seven passengers.

Open Bodies
Limousines
Full Cape Tops
Victoria Tops



40-H. P. with Top Up and Front Curtain, and Showing Tire on Side of Car

We build a few good cars for those who want the Best.

Special cars built for those who want them

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BRANCHES:

66 West 43d Street, New York 629 North Broad Street, Philadelphia 43 Columbus Avenue, Boston 394 Wabash Avenue, Chicago

Members Association Licensed Automobile Manufacturers

Northern

*We will ship your
order today.*

The Sturdy Northern RUNABOUT 7 h. p., \$650

The best Runabout ever offered the American public. If you want style, comfort, reliability and unparalleled durability, you want a Sturdy Northern.

If you want the best looking Runabout you want the Sturdy Northern.

If you want a stay-satisfactory Runabout, a machine that will give you less trouble than any car of its class, you want the Sturdy Northern.

No Runabout can beat this in looks or finish, and none can equal it for simplicity of machinery or strength of construction.

No machine can approach it for efficiency.

You are the tester. Ride in it. Take it on any road or hill. Prove it thoroughly, and see for yourself that it is the *top-notch* among Runabouts.



Price includes a pair of finest brass oil lamps, imported horn, extra spark plug, tire pump and repair kit, tool holder and tools for making roadside adjustments.

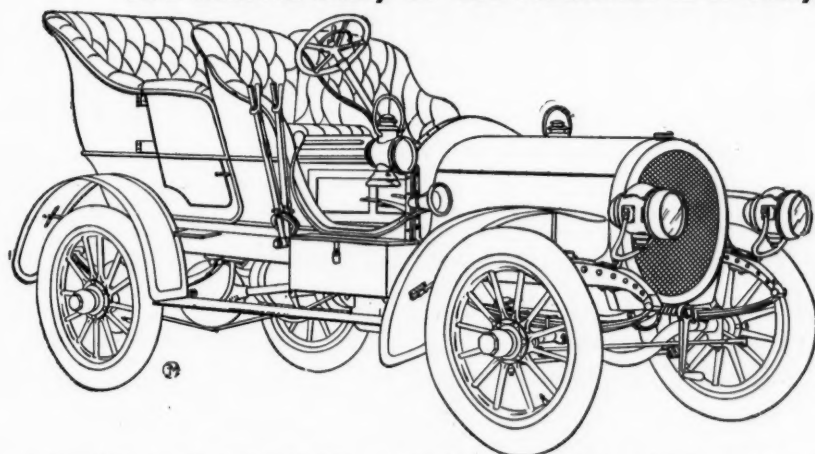
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DETROIT, U. S. A.

PETER FOGARTY, New York City Agent
142 West 38th Street

Member A. L. A. M.

NATIONAL MOTOR CARS "Watch for the Round Radiator"

The individuality of the National is a daily advertisement for dealers



National Model C, Price \$2,500. 4 Cylinders, Vertical, 4 1/4 x 5, 24-30 h. p.

"THE WONDERFUL HILL CLIMBER"

Quiet, easy running, simply controlled. All parts readily accessible. More features of real merit than any other touring car at any price.

Our catalogue is interesting.

Write now.

NATIONAL MOTOR VEHICLE CO.

Member American Motor Car Manufacturers' Association, Chicago.

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Chicago: Hayden Automobile Co., 1337 Michigan Ave.

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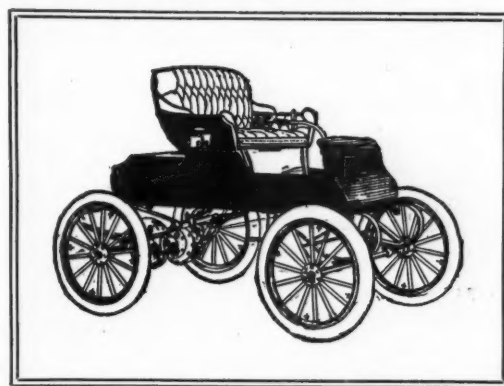
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National Electric Model 50.

EVERY DEALER has certain prospective customers who are prepared to buy National electric vehicles if properly approached on the subject.

Let us familiarize you with these serviceable little Runabouts and Stanhopes.

Our Catalogue is instructive.

MICHELIN

Ask your chauffeur what tires give the best satisfaction and results.

Ask your neighbor who is always using his car what tires he prefers.

Ask professional mechanics and automobile builders their opinion as to the superiority of one tire over all others.

Ask track drivers and record breakers in every endurance and speed contest what tires they use.

The answer you will invariably get will be Michelin—Michelin—Michelin.

Write for instruction book and price list—free.

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E. D. WINANS, Gen. Mgr.

Telephone—4657 Madison.

Here's Your Opportunity

1905 Type VIII Rear Entrance Tonneau Autocar



Type VIII Autocar with Tonneau

GUARANTEED in every respect to be exactly the same as a brand new Autocar. This car was purchased about a month ago and traded in again for a 40 h. p. Thomas 4 cylinder car. The machine was not run over 200 miles—not a scratch or blemish—car is painted green with dark green upholstery.

EQUIPMENT OF CAR consists of several things that do not come with car as follows: 2 Bullet Mirror Lens Searchlights, Rear Basket, painted green to match car; with brass railing to go around same. This basket is generally placed on car

when tonneau is detached. The tonneau can be detached and basket put on in 15 minutes. Oil Lamp, Tools, & Car cost \$1,400; our price on the machine \$1,250.

1904 AUTOCAR—We have another Autocar purchased last August. Equipped with brand new set of Fisk Tires, with 4-inch tires on rear and 30x3½ on front. This car is **exactly** same car in every respect as the 1905 car shown above but has lever steering arrangement instead of wheel. Car has been thoroughly overhauled and is in first class condition. We guarantee it in every respect. Cost last year \$1,700. Our price \$795.

NATIONAL 4 cylinder, 1904 Model, perfect condition, looks and runs as good as a new car. Cost last year \$2,000. Our price \$1,095. We sell only first class cars. Write for particulars and testimonials.

AUTO EXCHANGE & SUPPLY CO.

A. L. DYKE, Mgr.

3939 Olive Street

ST. LOUIS

STANDARD PARTS FOR POWER TRUCKS AND WAGONS

The marked economy of power wagons for delivery, express and truck service, and their superior reliability when in reasonably intelligent hands, is so well established that those who are conversant with the facts cannot fail to see that power wagons are rapidly beginning to supersede horse service.

PARTS WE SUPPLY

STEERING GEAR, Complete	CHAINS	COUNTERSHAFT and REDUCTION GEARS
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The Garford Company, Elyria, Ohio.

Selling Agent: HAYDEN EAMES, American Trust Bldg., Cleveland

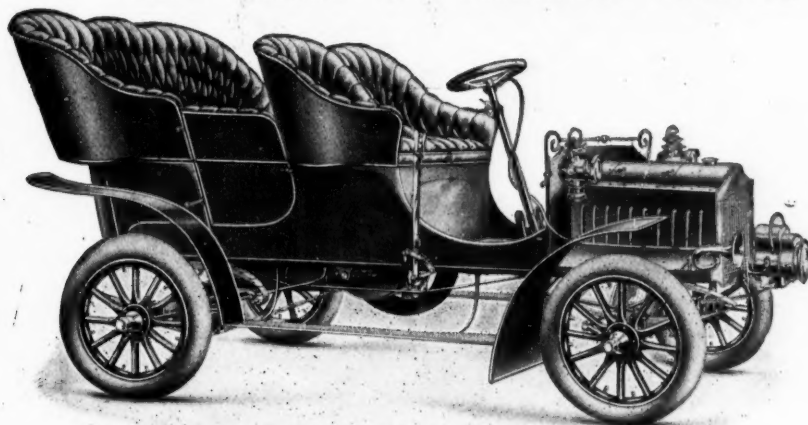
The Powerful DOLSON

The Strongest Car in
America at the Price

\$1350

COMPLETELY EQUIPPED
AND READY FOR
EXTENDED TOURING

ALL KINDS OF TALKING POINTS AND REAL MERIT



The DOLSON is the strongest, most powerful car in America for its price. It is a hill climber par excellence, has plenty of speed, easy of control, beautifully designed, handsomely finished and upholstered. Wheel base, 90 inches. Wheels, 30 inches. Tires, 3½ inches front, 4 inches rear. Large, roomy tonneau, seating five persons comfortably.

In design, material, workmanship and specifications, the **DOLSON** compares favorably with high-priced cars, and it is listed at a price that enables agents to sell quickly and duplicate orders. We can and will make deliveries as specified.

Don't wait too long. Get in line now.
Write for further particulars.

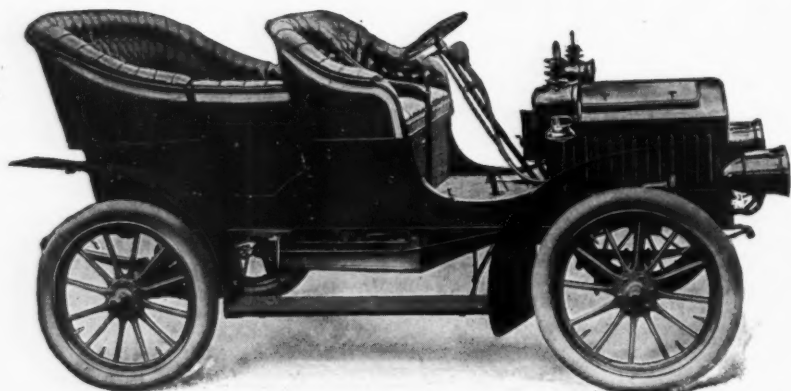
1905 MODEL C. Price, \$1350.00

Including two oil side lamps, acetylene head light, French horn, mats, full tool equipment, ready for extended touring.

JOHN L. DOLSON & SONS, : : Charlotte, Michigan

Chicago Agency: R. C. ST. HENRY, 1608-1610 Michigan Ave.

TWICE AS EFFECTIVE



In the calm and critical description of the Elmore PATHFINDER which was written by an expert and appeared recently in the Toledo Blade, this statement was made:

"The Elmore two-cycle gas engine is twice as effective as the four-cycle motor; because the

two-cycle works about half the total running time while the four-cycle works about a quarter of the running time."

If you do not know and had never heard anything more about the Elmore Pathfinder than this, would it not be sufficient to make you investigate the car without delay?

If you do investigate, this question of constant torque alone will win your unequaled admiration and enthusiasm.

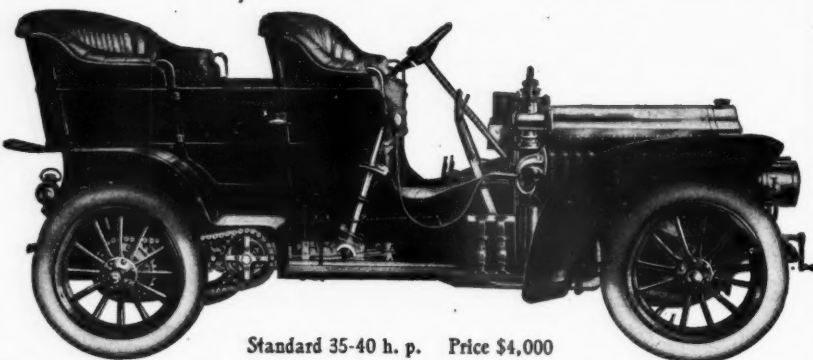
Send for full line of literature, asking for group C, the booklet illustrating the 6,000-mile trip, our 1905 catalogue and the opinions of people who have used our cars, all sent free upon request.

THE ELMORE MANUFACTURING COMPANY
804 Amanda Street **MEMBERS A. L. A. M.** **CLYDE, OHIO**

TWO MORE VICTORIES

And New World's Records by

Columbia
Cars



Standard 35-40 h. p. Price \$4,000

At the Readville, Mass., races May 30th, EDDIE BALD, driving a four-cylinder, 35-40 h. p. COLUMBIA TOURING CAR, regular stock model, price \$4,000, won the five-mile race for cars of from 30 h. p. to 45 h. p., in 5:58 2-5, a WORLD'S RECORD for stock cars; and H. P. MAXIM, driving an 18 h. p., COLUMBIA LIGHT TOURING CAR, regular stock model, price \$1,750, won the five-mile race for two-cylinder cars of under 24 h. p., in 7:23, also a WORLD'S RECORD for stock cars.

This completes a list of six important COLUMBIA victories in as many weeks—two at the Springfield hill-climb April 26th, two at the Worcester hill-climb May 25th, and two at the Readville track.

In all kinds of competitive tests, 1905 COLUMBIA stock cars have demonstrated their superiority.

Catalogue of Columbia 35-40 and 18 h. p. Gasoline cars will be sent on request; also separate catalogues of Columbia Electric Carriages and Columbia Commercial Vehicles.

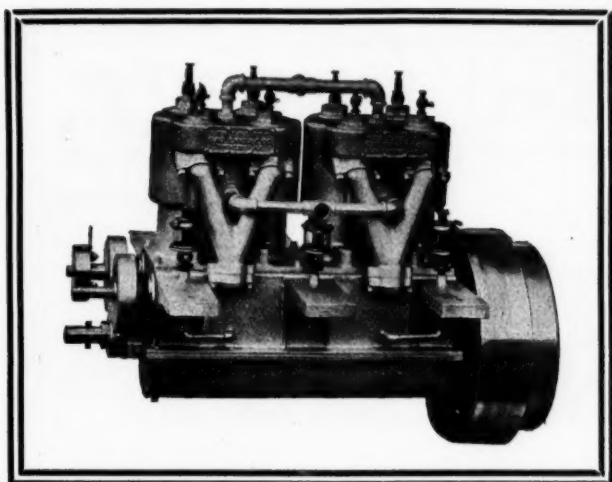
ELECTRIC VEHICLE CO., Hartford, Conn.

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THE ORIGINAL AND RELIABLE



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Gas
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Co.,** 301 West Main Street
ROCHESTER, N. Y.

Up-to-date Engines, Transmission Gears and Clutches. Equal to the very latest French production; air and water-cooled motors. Air, 1 to 4 cyl., 2 to 15 H. P. Water-cooled Motors, 1 to 8 cyl., 10 to 45 H. P.

SEARCHMONT CARS REBUILT

REFERENCE: John Wanamaker, New York

PENNSYLVANIA  CLINCHER

Everything has its place, but the road is not the place to repair tires.

If you use good judgment you will not need to employ the road for such purposes.

The time to use good judgment is before you buy the tire.

PENNSYLVANIA RUBBER CO.
JEANNETTE, PA.

SOLID SATISFACTION

in owning a

Premier Portable Garage

Unique and Attractive
in Outline.
Solid and Roomy.
Reasonable in Price.
Prompt Shipments.

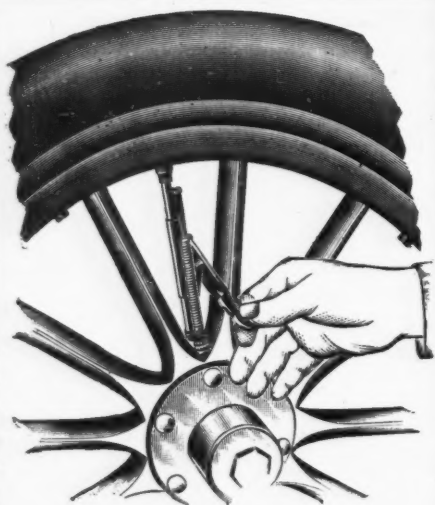
(Ample in size to turn the largest touring car)

HOLLIS, PARK & POLLARD

17 CANAL STREET
BOSTON, MASS.

This house 16x16 feet, Price, \$300.00 f. o. b. your station, east of the Mississippi.

Also manufacturers of camps, cottages,
play houses and portable poultry houses

**"UNEEDEME"**

TO OVERCOME YOUR
TIRE TROUBLES

See How Easy it is to Remove and
Replace Tires with these Tools.

It is a recognized fact that the genuine Clincher
Tires have never been equalled for efficiency and
safety. The only drawback was the one to three
hours required with ordinary tools for removing and
replacing tires. Of the hundred-and-one schemes
devised, none have proved satisfactory but the

"UNEEDEME" TOOLS
SIMPLEST—SAFEST—SUREST

Simplest, because there is nothing to get out of or-
der; Safest, because there are no sharp points or
edges to cut the tire; Surest, because no matter
what the size of the tire or the inexperience of the
operator the same can be removed in three minutes.

THINK OF THE SAVING IN
TIME, MONEY AND TROUBLE

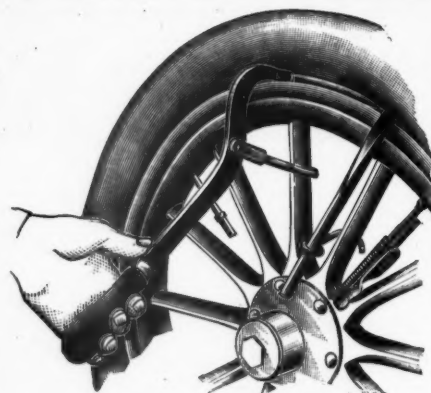
It increases the life of the tire—cannot cut or tear,
and eliminates the "warts" common to other pro-
cesses. Once used you wouldn't be without them.

PRICES.

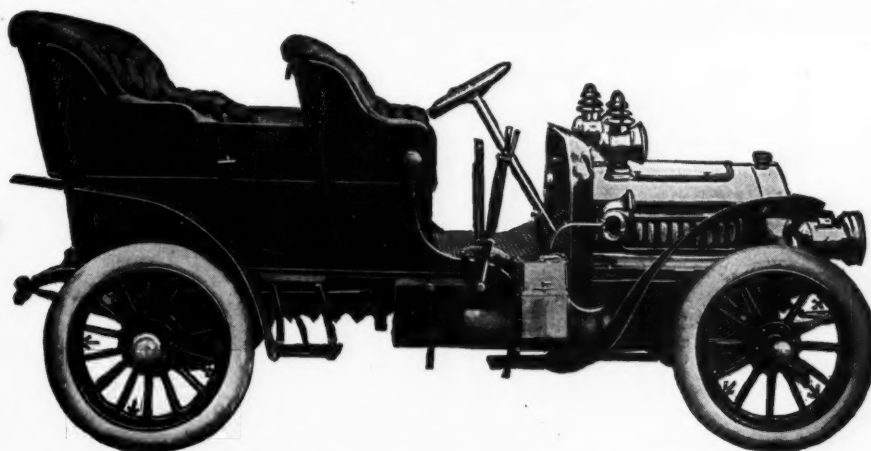
Set of Three Tools, Black Enamel.....\$3.50
" " " Nickel Plated..... 4.00
Automatic Lug Elevator, 50c extra.

Write for Booklet.
Special Inducement to Dealers.

"Uneedme" Tool Co.
COLUMBUS, OHIO.



The
Automobile
with a
Reputation
Behind It



"Studebaker
Quality
Throughout

STUDEBAKER

No. 9503 4 Cylinder Gasoline Touring Car

The Automobile driven and pounded over all sorts and conditions of roads is bound "to come to grief" if its bearings are imperfectly lubricated. Experience has demonstrated that the nearer the lubrication system approaches automatic action the more satisfactory will be the service. The **STUDEBAKER CAR** among its many "common sense" advantages, employs

A Direct and Positive Pressure Oiler

Simply fill the oil tank, and by means of a pump, oil is forced under pressure to all bearings, at regular intervals. The oil must "get there," as the pressure is of sufficient strength to overcome any "clogging." Sight feeds on the dash inform the autoist of the flow of oil. There are no leaky grease cups.

SEND FOR CATALOG

STUDEBAKER AUTOMOBILE COMPANY SOUTH BEND INDIANA

Member Association Licensed Automobile Manufacturers.

New York City, Broadway and 7th Ave., at 48th St.
Denver, Col., corner 15th and Blake Sts.
Chicago, Ill., 378-388 Wabash Ave.

REPOSITORIES:
Salt Lake City, Utah, 157-159 State St.
Kansas City, Mo., 810-814 Walnut St.

Portland, Ore., 330-336 E. Morrison St.
San Francisco, Cal., corner Market and 10th Sts.
Dallas, Texas, 317-319 Elm St.

BATES 1905 Two Passenger RUNABOUT

A Strictly High
Grade,
High
Class
Car

\$650

Weight
950
Lbs.



SEND
FOR
CATA-
LOGUE


USE A
Bates
AND
KEEP
YOUR
DATES



BATES AUTOMOBILE CO., LANSING, MICHIGAN

CLAIMS ARE ONE THING PROOF IS ANOTHER

The Warner Auto Meter

ABSOLUTELY AND
ACCURATELY **DOES**

GAUGE THE SPEED
HERE 

SHOWS THE MILEAGE OF
THE TRIP HERE 
AND RECORDS THE
TOTAL MILEAGE OF
THE SEASON HERE 

HERE'S PROOF

New York, May 8, 1905.

Sidney A. Bean, Esq.,

Representing Warner Instrument Company,
39 Cortlandt St., New York City.

Dear Sir: In regard to the performance of the Warner Auto Meter which was on my 24 h. p. Peerless car used in my thousand-mile run at the Brighton track, I am pleased to say that I consider your meter invaluable to me during my run, and I do not believe there is a better accessory a man can put on his car.

It accurately indicated the speed at which I was traveling, while the Odometer recorded the distance. The dial was very steady and the meter very sensitive, instantly showing my variations in speed.

I experienced no trouble nor difficulty with gears, flexible shaft or meter during this severe test and am glad to speak in highest praise of so satisfactory a speed indicator and odometer.

Very truly yours,

Peerless Motor Car Company of New York,
C. G. Wridgway General Manager.

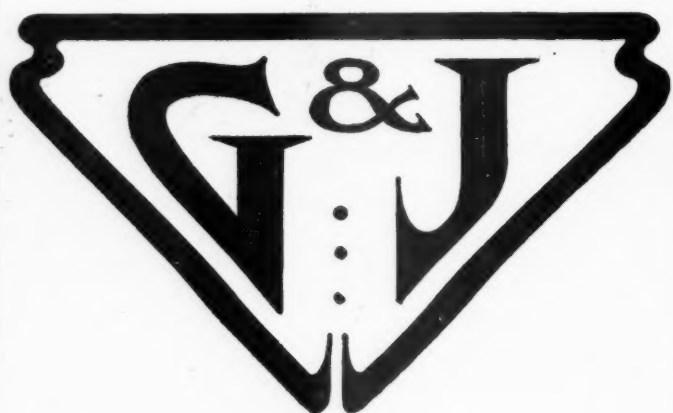
Write us for "Indisputable Evidence" and our Illustrated Catalog.

WARNER INSTRUMENT CO.

55 Roosevelt Avenue - - BELOIT, WIS.

N. Y. Office, 39 Cortlandt St.

Boston Office, 143 Federal St.



The Best Tires For Daily Use

ACME MOTOR CAR CO.
Reading, Pa., U.S.A.
(Office and Factory, 8th and Elm Streets)

April 11, 1905.

G & J Tire Company,
Indianapolis, Ind.

Gentlemen:—We shipped a 30 h. p. (2300 lbs.) Touring Car for demonstrating purposes, to New York City last December, equipped with a set of your thread tires, and, after four months of continued daily use, with five or six passengers, we find them inflated with the same air, while the surface of the tires has the appearance of never having been used.

We are deeply impressed with the result of this test of your tires, and will feel very well satisfied if all the other makes we furnish show up nearly as well.

ACME MOTOR CAR COMPANY,
I. D. Lengel, Manager.

THE TIRES THAT LAST LONGEST AND SHOW THE LEAST WEAR

G & J TIRE CO.
Indianapolis

CHICAGO
420 Wabash Avenue
DETROIT
247 Jefferson Avenue

DENVER
1528 Court Place
BUFFALO
9 West Huron St.

BOSTON
43 Columbus Avenue
CLEVELAND
337 Huron Street



Rims branded in the channel with these copyrighted marks have been inspected and pronounced perfect. We guarantee our tires on all rims so branded.



"Firestone"

Side-Wire Tires

Above All Others



The prestige of this famous tire has been steadily growing for years—it is the best known and most admired tire on the continent because it gives such satisfactory service.

It has been said the "Firestone" almost "sells itself," and in hundreds of cases it has actually done so, because its true worth has won favor in the eyes of the Buyer who buys because he hears the "Firestone" is the Tire of all tires.

Then why not "Firestone"?

Attractive literature on request

Firestone Tire & Rubber Co.

AKRON, OHIO

New York Chicago Philadelphia Boston
St. Louis San Francisco Los Angeles

THE INCOMPARABLE WHITE

The Car for Service



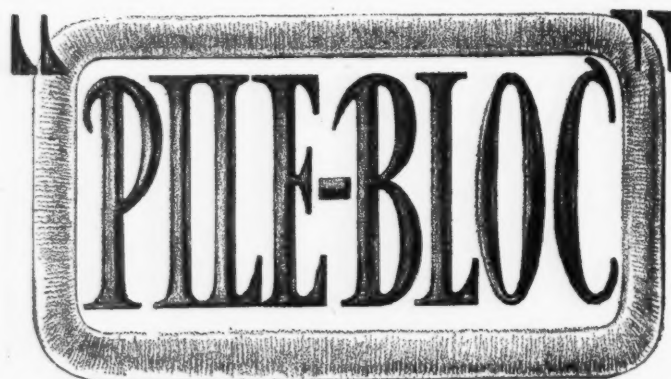
"In the Path of the Rainmaker"

a series of notable illustrations in White Bulletin No. 9, depicts the obstacles which a White car encountered and over which it triumphed on a trip from Los Angeles to San Diego during the recent floods.

Other illustrations in this issue of more than usual interest are the panoramic views showing the array of Whites in the New York automobile parade and also the White in the Inaugural Parade March 4th.

Send for this interesting publication to-day.

WHITE Sewing Machine **COMPANY**
Cleveland, Ohio.



Special IGNITION Batteries

100 Amp. Hours
200 Amp. Hours
360 Amp. Hours
600 Amp. Hours

OUR RECORD

as Exclusive Purveyors:

800,000 Sets

in actual use by the
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Our Record is Your Guarantee

WRITE US.

The "Pile-Bloc" Company

AMERICAN BRANCH

Telephone:
 5206 Cortland

253 Broadway, N. Y. CITY

DURD

**Guarantee
 Means
 Something**

Noah Webster must have had **DURD** in mind when he defined the word "guarantee." Here it is: **GUARANTEE** [gar-an-te]

In law and common usage, etc. *** to assure *** a thing that may be depended on. ***

Only *we* go further than Noah and **WAR-RANT DURD** batteries to give the *same* output *one year from now* as they give *today*. And **DURD**'s output today is *guaranteed*. Why don't *you* write?



CHICAGO BATTERY CO.

1400 Michigan Avenue

CHICAGO

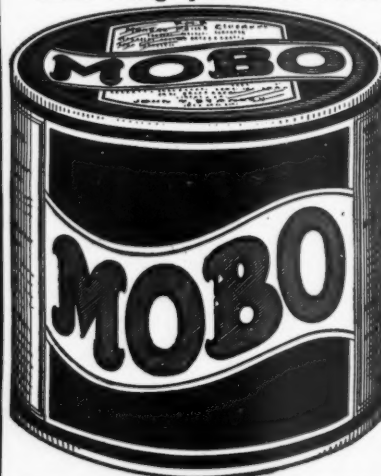
The Care of the Car

Washing the body of the machine, keeping the polished surface free from lubricator, road dust and gutter muck is just as essential to the life of an Automobile, as is the attention given the running gear.

Mobo, the new cleanser for Automobiles, will easily and quickly remove grease, dirt and grime and all traces of a hard run, without dulling or scratching the highly polished surface.

MOBO

is unlike common soap, as it positively contains no free alkali. Being a preservative as well as a cleanser, it prevents varnish or paint from peeling or cracking, and adds a fine gloss to the surface.



Mobo may be used with profit on leather goods, harness or woolen fabrics. Cannot harm the most sensitive skin, as it is a purely vegetable oil preparation and absolutely contains no free alkali. Put up in 2-lb. and 8-lb. cans; also in tubs, half barrels and barrels.

If your supply man does not keep *Mobo*, send us his name and address, and we will see your wants are supplied.

**JOHN T. STANLEY
 New York.**



POPE
Waverley
ELECTRICS

will meet your requirements for the hundred and one occasions for which no other vehicle will answer.

**Freedom from Care
Perfect Cleanliness
Luxurious Comfort**

have given the Pope-Waverleys a pre-eminent position of

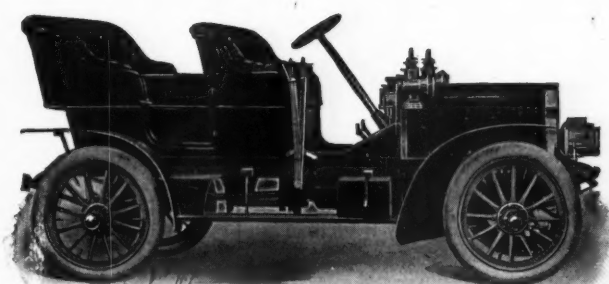
Unquestioned Excellence

Their varied functions make them the most useful cars on the market today. ... Your summer pleasure will not be complete without a Pope-Waverley for the daily spin and social calls. ... Model 36, like the illustration above, **Price, \$900.**

Let us send you one of our handsomely illustrated catalogues, showing our different models of both pleasure and commercial vehicles, ranging in price from \$850 to \$2,250.

POPE MOTOR CAR CO.
INDIANAPOLIS, IND.

CORBIN AIR-COOLED CARS



MECHANICAL CONSTRUCTION UNEQUALED

For Absence of Complication

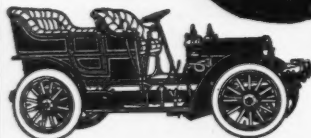
**Corbin Motor
Vehicle Corp'n**

New Britain, Conn.

New York Agent, 4 W. 38th St. Boston Agent, 163 Columbus Ave.

THE

Locomobile

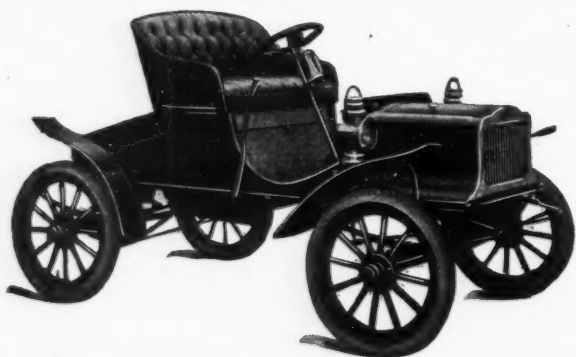


FOR OUR ROADS, IS BETTER
THAN ANY FOREIGN CAR

The Locomobile Company of America, Bridgeport, Conn.



The \$500 Gale



WE wish to state that because this car is sold at so low a figure, is no sign that it is cheap. Every part is the best that we can make or buy, and we will replace any defective parts free of charge at any time inside of one year after purchase.

Eight H. P., horizontal single cylinder 5"x6"; weight, 1,100 lbs.; 72" wheel base; 28"x3" tires. New-type transmission; two speeds, forward and reverse; absolutely oil tight; cone clutch on high speed; new-type bands on low and back up; no gears running on high speed. Pump direct connected to engine. Gasoline and water tanks hold five gallons each. Kingston carbureter, Dow vibrator coil, Brown & Lipe differential, diamond chain. Speed, 30 miles per hour. Frame, angle iron. Body can be tipped up by loosening two nuts in floor of car and removing cotter pin. Car can be run without body, as all wires, connections, etc., are on the chassis.

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1245-45 Wabash Ave.

THE WESTERN TOOL WORKS, Galesburg Ill.

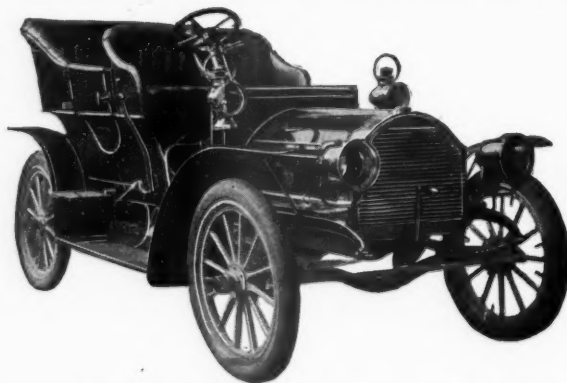
Each machine delivered is one more perfect link to our endless "Chain of Success."

A STODDARD-DAYTON in a territory always brings more orders: "Our best salesman."

The fact of continued excellent performance is a direct result of good mechanical principles—best material—and perfect construction.

Certainly worthy of investigation.

STODDARD-DAYTON



the car of Supreme worth and as "Good as it Looks."

\$2,000. F. O. B. Factory

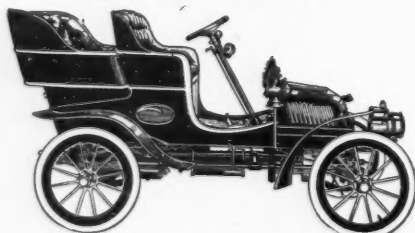
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\$900.00



AGENTS WANTED

The simplest, strongest, most durable, reliable and most powerful car ever built for anything like the price.

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SHAFT DRIVE

ACCESSIBILITY

THREE-POINT SUSPENSION

It is in a class by itself

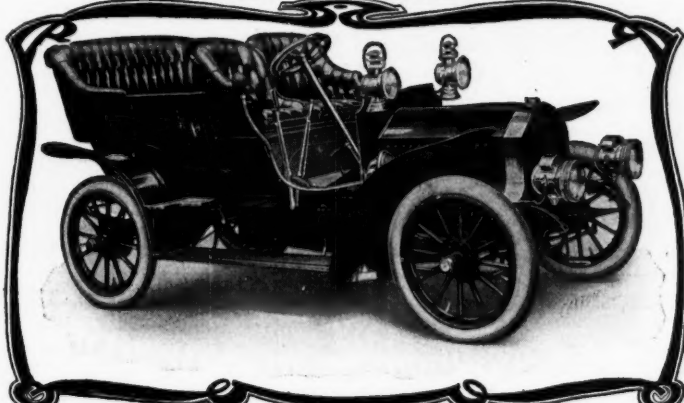
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Member Association Licensed Automobile Manufacturers.

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THE CAR OF SIMPLICITY



THE PRICE

of the Cleveland Car is consistent with the design, material and workmanship that enters into its construction.

Perfection has been our aim and no expense has been spared to make the Cleveland Car a model of excellence in every respect. Our yearly guarantee is a feature which shows the confidence we have in the Cleveland.

Four-cylinder vertical engine, 18-20 h. p., \$2,800.

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Bring an expert with you.

Send for new catalog, just issued.

Cleveland Motor Car Co.

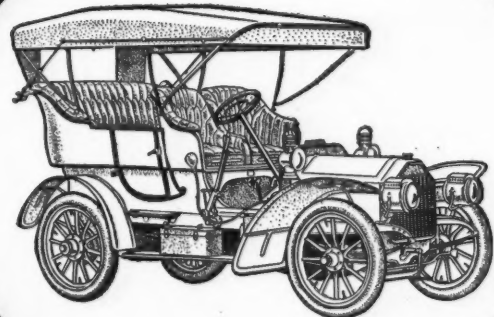
Eric Street, Cleveland, Ohio

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Peerless Experience

One important factor in the success of the Peerless Motor Car has been the long experience of the men who make it. From the chief engineer down to the mechanics, they are men who have been in the automobile business since its inception, and even before then were making gas engines or doing similar mechanical work.

The Peerless Company itself has been making cars since 1898.

Is it any wonder the Peerless stands so high?

Catalogue sent on request.

The Peerless Motor Car Co

Cleveland, Ohio



THE HAPPY MEDIUM THE ST. JOHN SOLID RUBBER CUSHIONED TIRE

The greatest tire man's ingenuity ever produced.

The tire that solves the most vexing problem now presented to both the manufacturer and private owner of automobiles.

It cannot PUNCTURE. Perfectly RESILIENT, and saves one-third the power now expended on other tires. Fits regular Single and Clincher rims. Easily applied.

Adopt our tire and save annoyance and expense.

Write for our 1905 Catalogue, with testimonials, etc.

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SECURELY LOCKED TO RIM!
INSURING POSITIVE SAFETY

It is their Exclusive Features which have given FISK TIRES world-wide celebrity. These points of advantage, combined with Durability (insured by the finest quality and workmanship) have caused its enthusiastic endorsement by everyone of experience. : : :
Note the Air Space—It's all above the rim!

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Largest Automobile Supply House in America

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Mr. Dealer: Patronize the Jobber who protects your interest.

Gate City Motor Car Co.
AUTOMOBILES AND SUPPLIES
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Yours is the first supply catalog received here this season so far as we know whose publishers have made any effort to protect the dealer. All the others have given our customers the same discounts offered us. We naturally appreciate the difference. Yours truly,

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Horizontal Opposed Cylinder Engine, 4x4.

HAVE PROVEN THEIR
VALUE in ACTUAL SERVICE
BECAUSE THEY ARE
SKILFULLY MADE AND
MECHANICALLY CORRECT

If you are interested in Efficiency,
Durability and Neatness of Design,
write us.

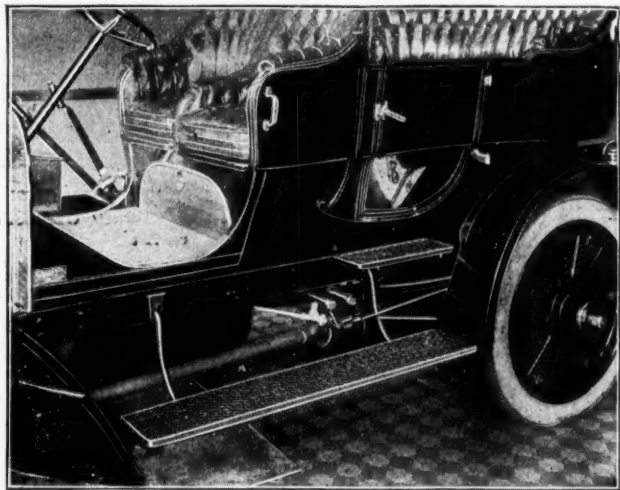
BEAVER MFG. CO.
MILWAUKEE, WIS.

16-18 H. P.



Horizontal Opposed Cylinder Engine, 5x4.

The Q & C Stanwood AUTOMOBILE STEP

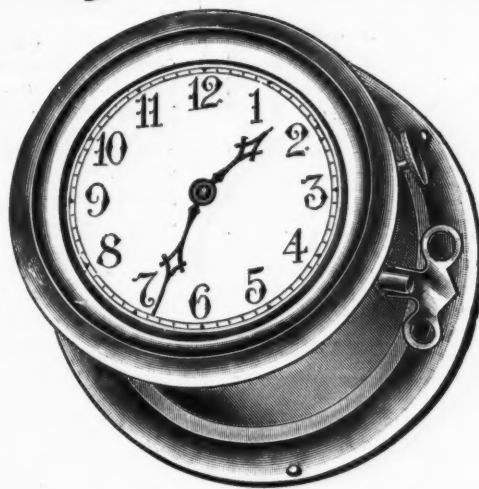


The very best step for Automobiles as it never wears out, requires no repairing and always looks well ... The Steps are made of crimp steel, act as foot scrapers, keep the car clean, and allow dust and mud to fall through.

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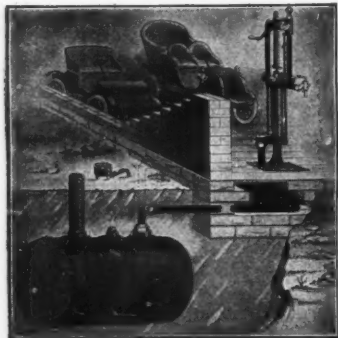
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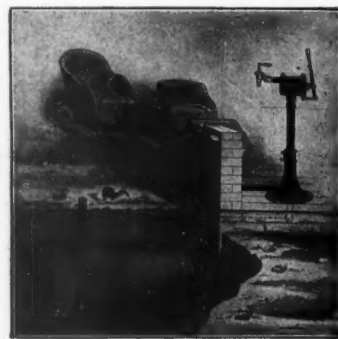


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Established 1885 **BOWSER** Over 200,000 in use
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We manufacture Gasolene Storage Outfits—all kinds. Self-measuring Outfits for Garages; smaller, less expensive ones for private automobilists. If you use any quantity of gasolene—no matter how small—you will find in our catalog a tank exactly suited to your purpose. We shall be glad to mail you our catalog. It was prepared for YOU. Your request carries with it no obligation. It simply indicates your willingness to investigate the most complete line of tanks ever offered gasolene users. Ask for Catalogue XV.

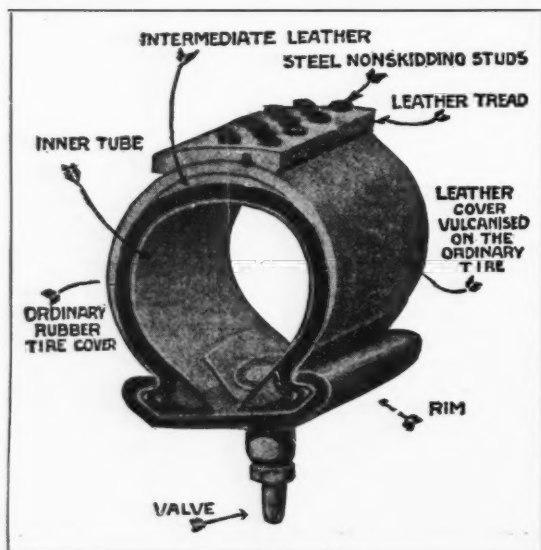
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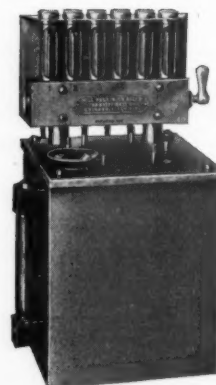
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It measures the oil, and uniformly forces exact quantities to each bearing it serves, regardless of the resistance, or of the varying resistance, in the different tubes. It feeds only when the machinery is in motion.

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Have you seen the new **KOKOMO** Mechanically - Attached
AUTOMOBILE TIRE?



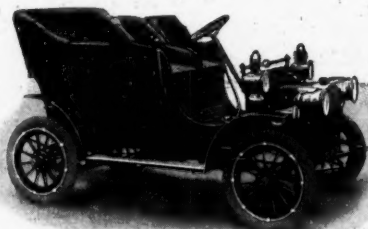
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Quickly attached and detached.
Creeping and Rim Cutting entirely avoided.
Made of the very best material and workmanship
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Write us for full particulars.

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**The Glide Style D—Two-Cylinder
Opposed Model**

About one year ago the J. I. Case Threshing Machine Co. of Racine, Wis., decided to furnish each of their traveling salesmen with a motor car, partly for purposes of expediency in calling on the farmer trade and partly for the prestige such an innovation would give them.

In the selection of cars, one of the main questions was "stability,"—for country roads are not always good and the purchase of a line of cars that would not stand up was an error to be avoided.

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One of them was a Glide car.

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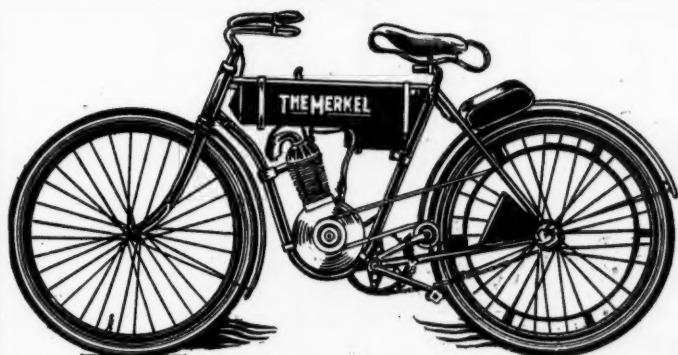
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Have no Equal.

Manufactured under utmost care from best materials, they assure the rider Speed—Safety—Comfort—Durability and Ease of Control.

The Merkel is neat and simple in construction yet competent in motive power.

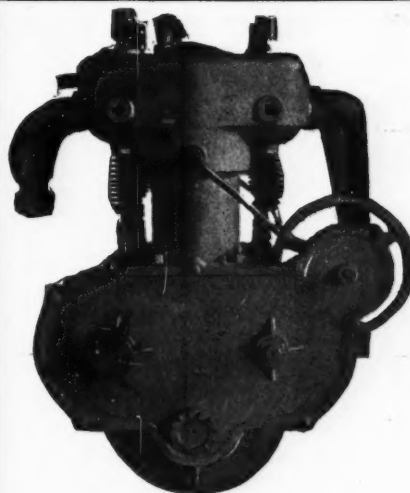
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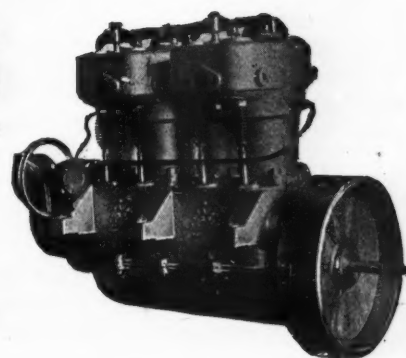
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High class chains can be made only from high grade materials. Diamond rivets are of large proportions, and are made of nickel steel—guaranteeing great strength and constant efficiency in the most important part of a chain. Try a "DIAMOND" when your old chain is worn out. It fits any standard sprocket.

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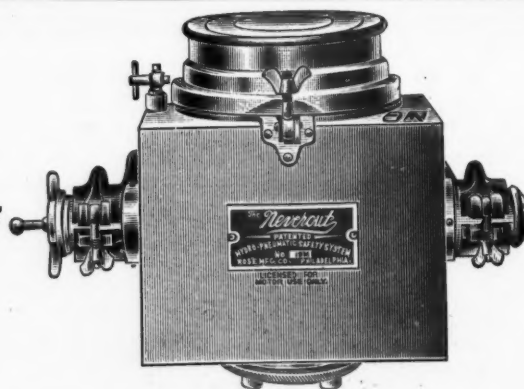
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Nothing like

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Patent Safety Gas Producer

has ever been seen before. It is the most wonderful gas generator on the market—the simplest and the most economical method of supplying gas for motor cars and boat lighting systems.

Produces the whitest, steadiest and most penetrating light, and is safe and odorless.

No gas confined under pressure—no danger of explosion—but always ready for instant use.

Immediately lighted at any time—no waiting. Extinguished without waste—no after-generation.

A great saver of carbide—keeps it intact for months and every bit of it is turned into gas.

Such a wonderful generator deserves the best searchlight and

The Neverout
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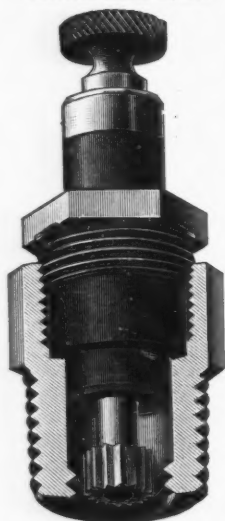
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IT SPARKS IN OIL
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Your money back after thirty days' trial if you are not satisfied.

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From the
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We find this carbureter feeding the engine evenly and properly from the lowest to the highest speeds and we do not hesitate to recommend it as the best carbureter we have tried.

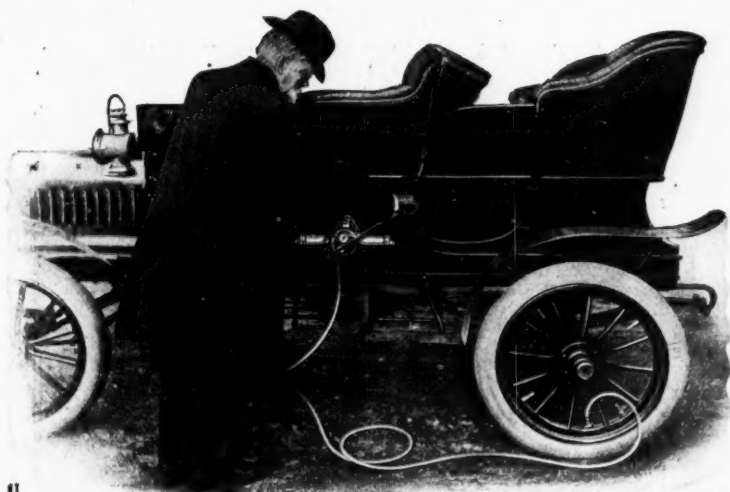
IT FED OUR ENGINE PROPERLY IN ALL OUR RECENT TESTS, HAULING AS HIGH AS 27,000 LBS. GROSS WEIGHT ON OUR TRUCK, NEVER MISSING EXPLOSION A SINGLE TIME. ... ETC. FOUR WHEEL DRIVE WAGON CO., H. Theo Hansen, V. Pres. and Mgr.

It's not what we claim, so much as what actual users say of

**ACORN
CARBURETERS**

that proves their Sterling Reliability. A trial will convince anybody. Write

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Attached to your car makes pumping up a pleasure. No more "back-breaking." A child can inflate the tires of the largest car. Is always ready. *Pressure gauge insures uniform inflation.* Write for Booklet E and agency proposition to : : : : :

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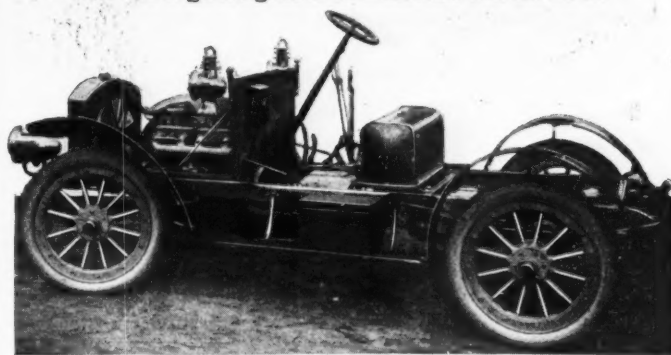
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A BRIGHT STAR IN THE FIRMAMENT

Here is a car possessing positively every PROVEN improvement in motor car construction. It is as perfect in every detail as human ingenuity and the highest grades of materials can make it.



A Great Big, Magnificent Car in appearance, silent in operation, 108 inch wheel base, 28-32 Horse Power, 4 cylinder, 4 1/4 x 5 inch vertical, and we GUARANTEE

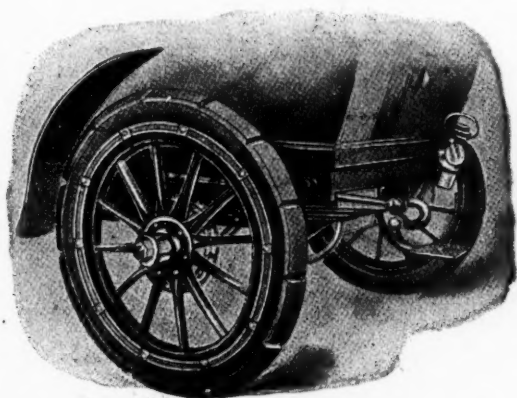
Absolutely Immediate Deliveries

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Is made of Anhydrous Leather, the only Leather on the market which resists Water and Oil, and the only Leather suitable for facing Clutches, Brakes, and for Mud Guards and Repair Sleeves for Tires.

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The Von Schwarz

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JVS
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Acetylene Burners

SOME ADVANTAGES

They are Recognized Standard Burners the World Over

Accurate in consumption. Free from carbonization and other troubles, and they are

Licensed under Patent 589342, August 31, 1897. This patent has been adjudicated by the U. S. Court of Appeal and IS VALID.

We advertise not only our burners, but also those firms who confine themselves to equip their lamps with **Licensed Burners.**

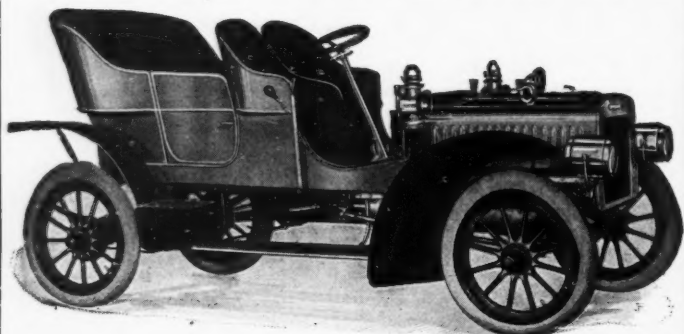
Is there any reason why you should equip your lamps with cheap infringing imitations? **Protect your customers as we do protect you.**



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H. KIRCHBERGER & CO.,
GENERAL LICENSEES,
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Four cylinder vertical motor.
Shaft drive, to bevel gear axle.
105-inch wheel base. 32-inch wheels. 3½-inch tires.
Detachable side entrance tonneau with the best combination of steps and door.

Model "D"—12 H. P. double opposed motor in a 1400 pound rig, with detachable side entrance tonneau. 86-inch wheel base, 30-inch wheels—Price, \$1000

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"Marks a New Era in Automobile Construction"

A 40-45 H. P. 4-cylinder, 4-cycle engine, five-passenger, side entrance, Gasolene Touring Car of the Highest Grade WITHOUT Starting Crank, Change Speed Gears, Clutch, Cams, Rocker Shafts, Tappets, Valve Gearing or Complications.

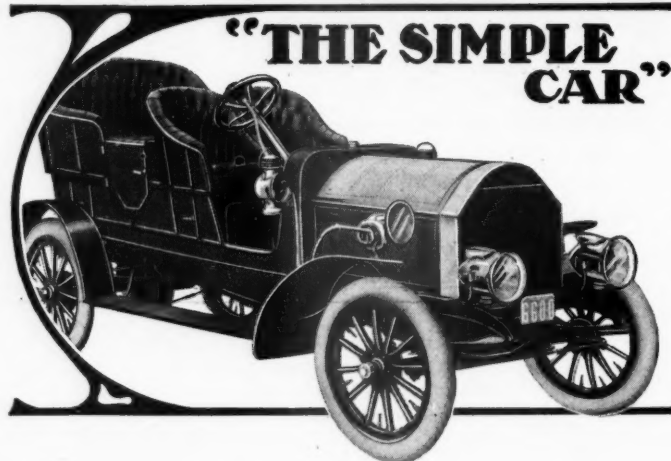
The Gas-au-lec is the Simplest Gasolene Car in the World, both as to construction and control, and the easiest to operate and maintain.

Every movement of the motive power and the car, from a state of absolute rest, forward at any speed or reverse, is controlled by one lever, operated either by hand or foot as preferred.

Positively no other speed or movement controlling device of any kind on the car. Triple brakes—irreversible steering gear.

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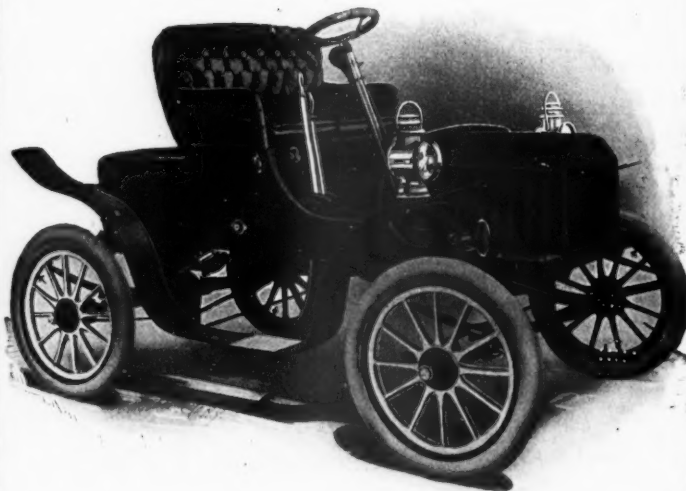
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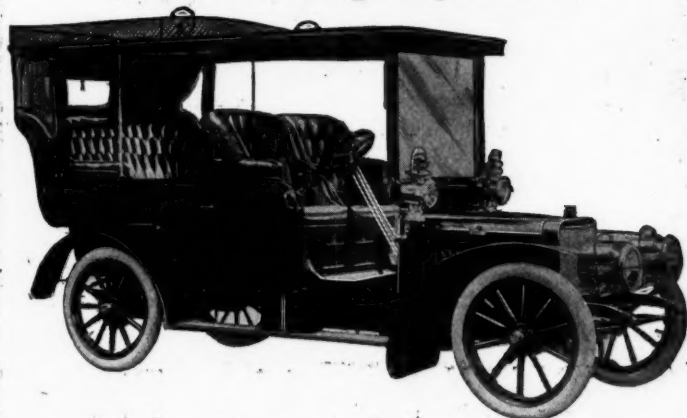
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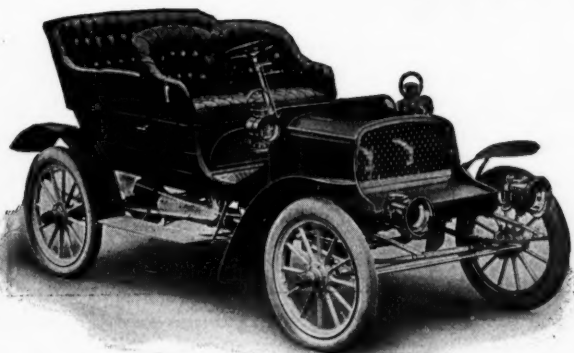
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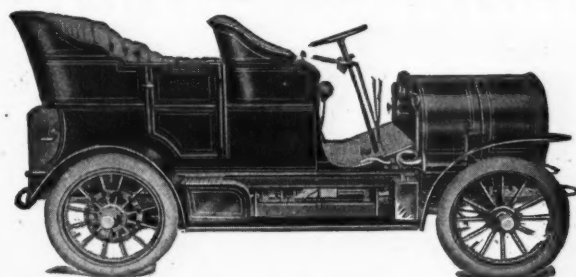
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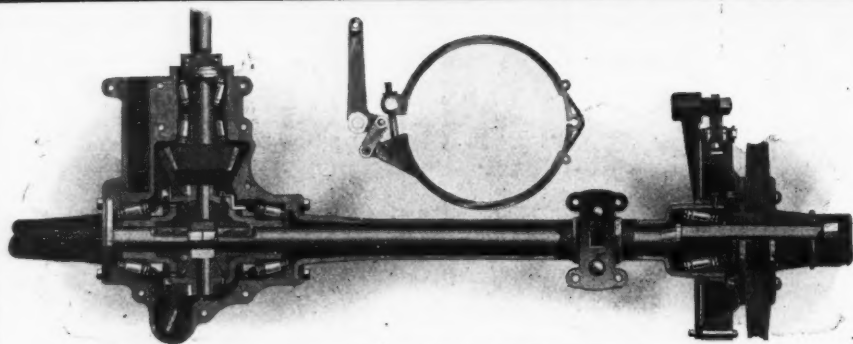
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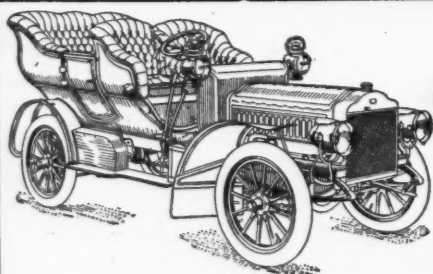
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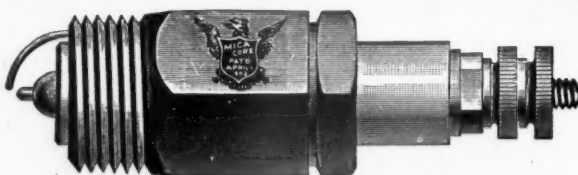
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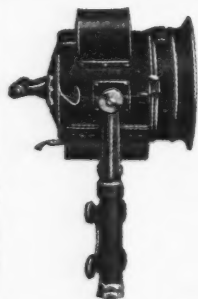
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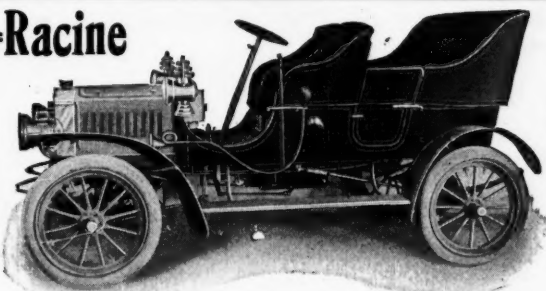
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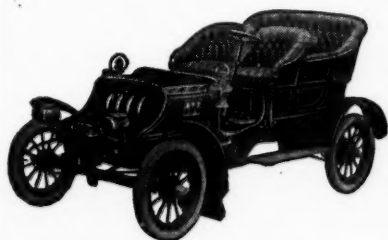
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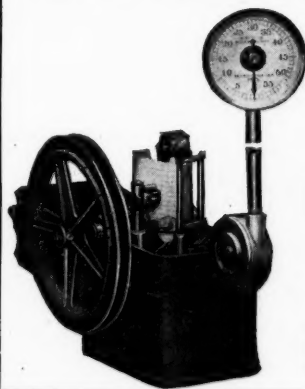


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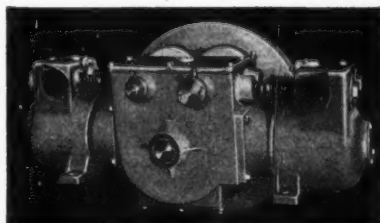
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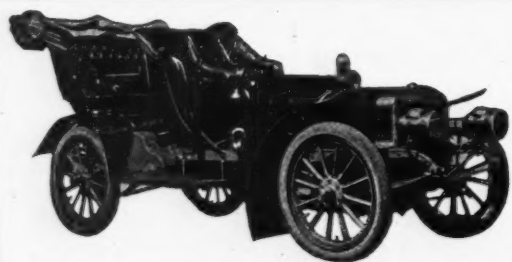
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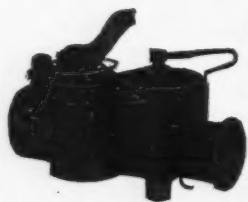
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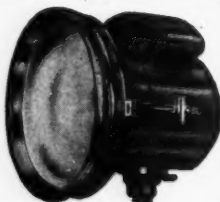
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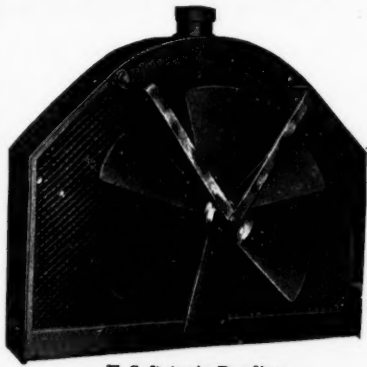
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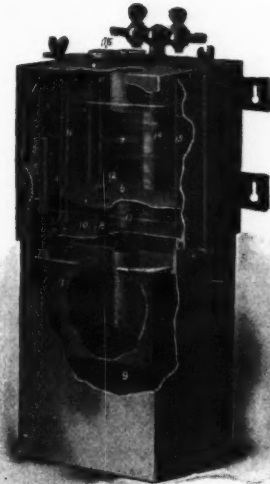


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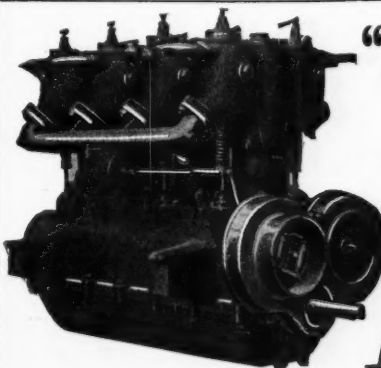


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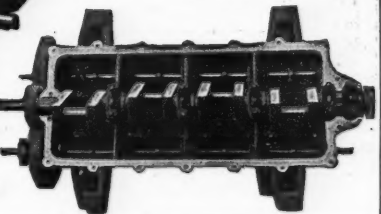
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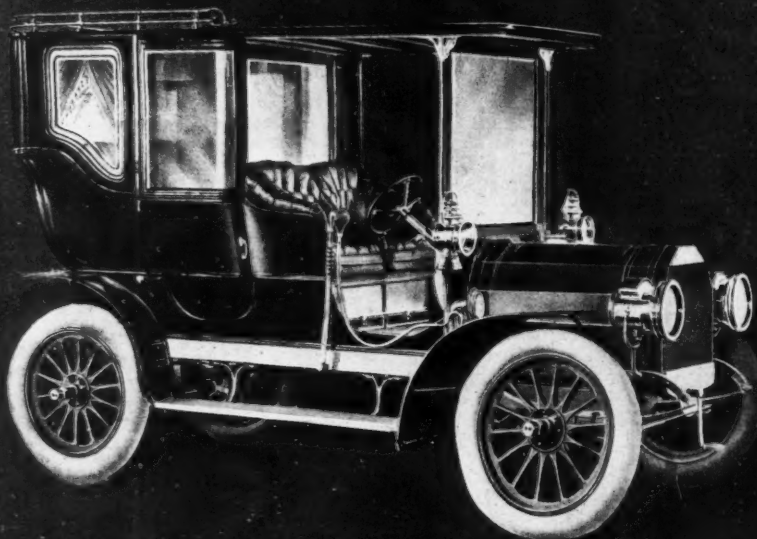
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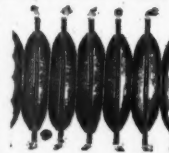
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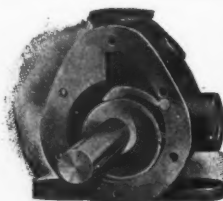
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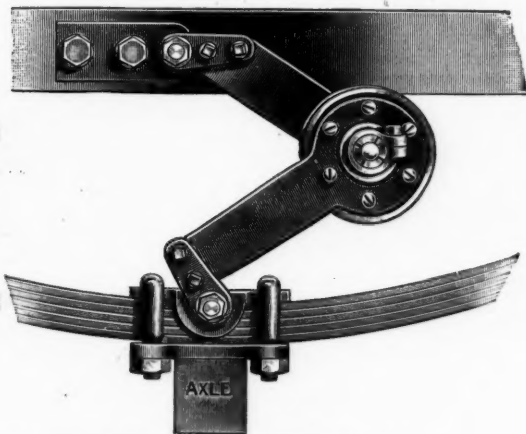
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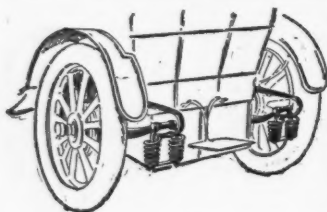


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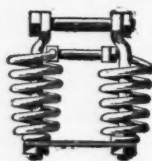
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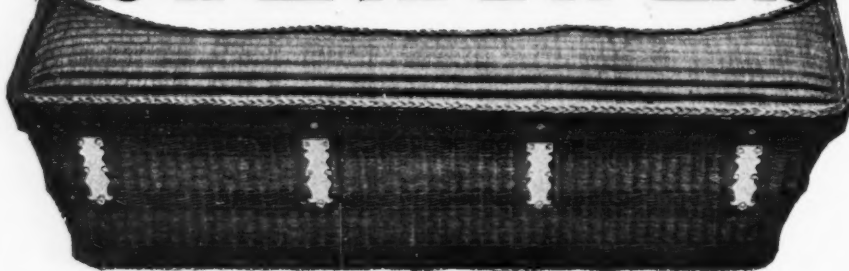


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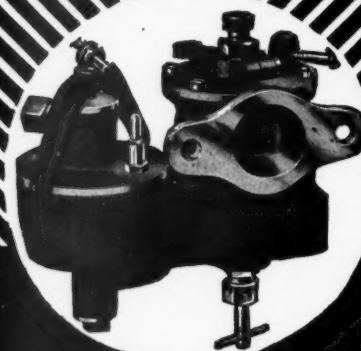
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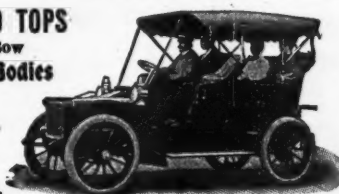
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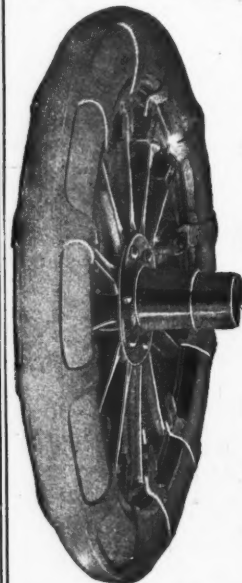
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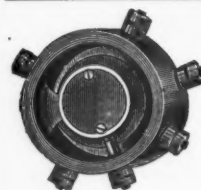
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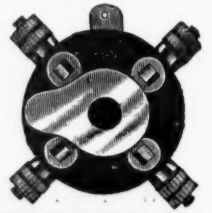
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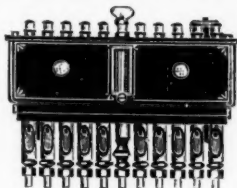
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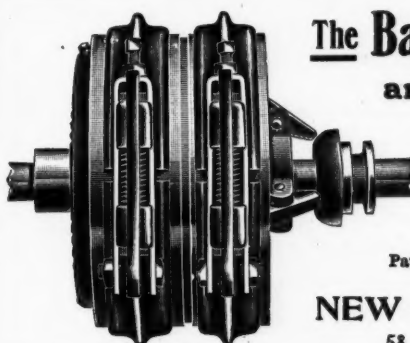
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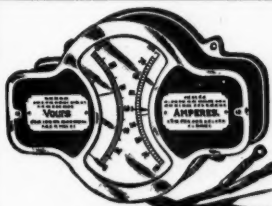
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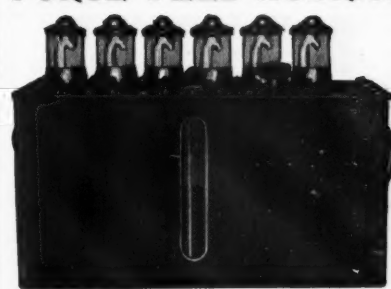
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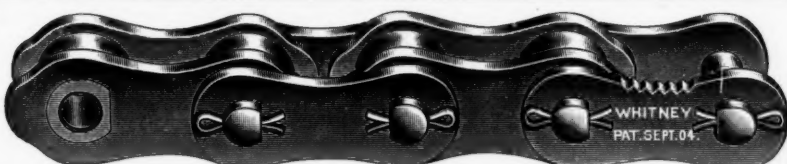
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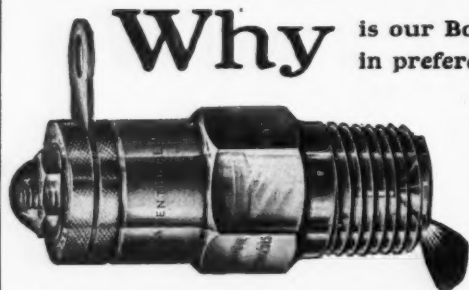
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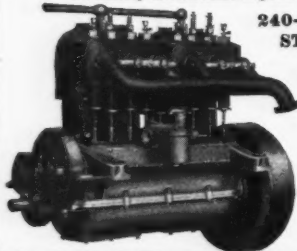
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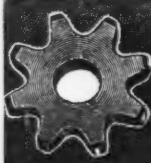
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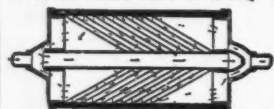
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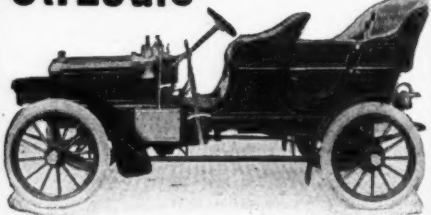
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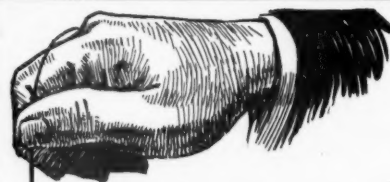


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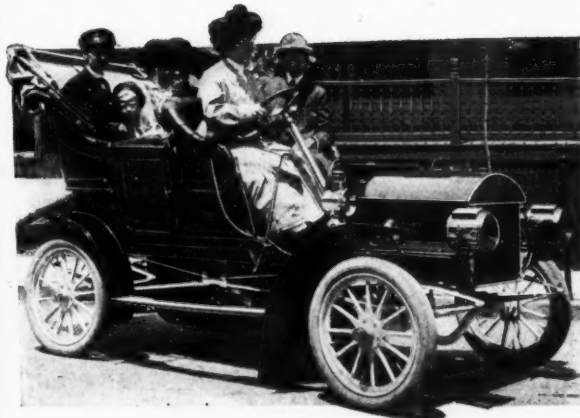
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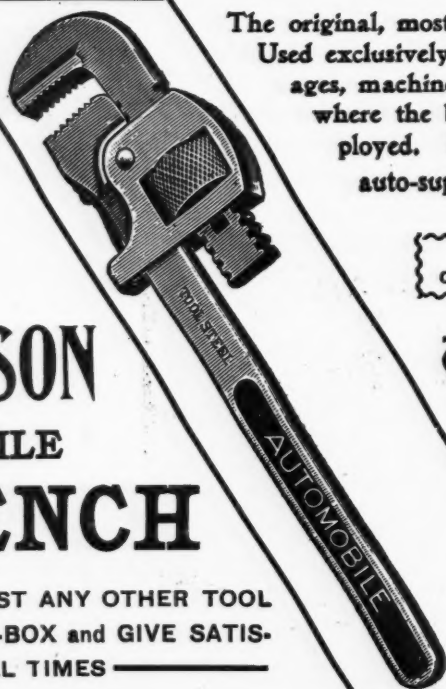
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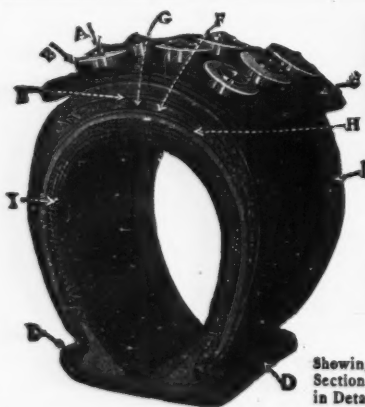
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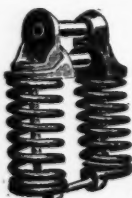


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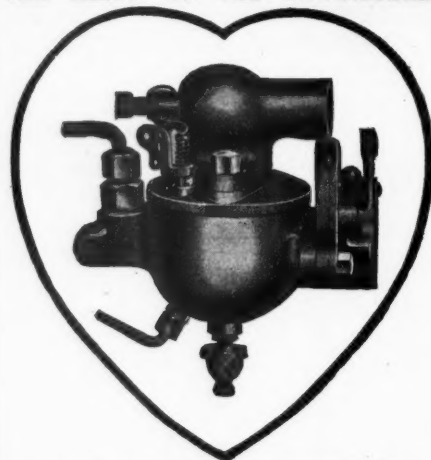
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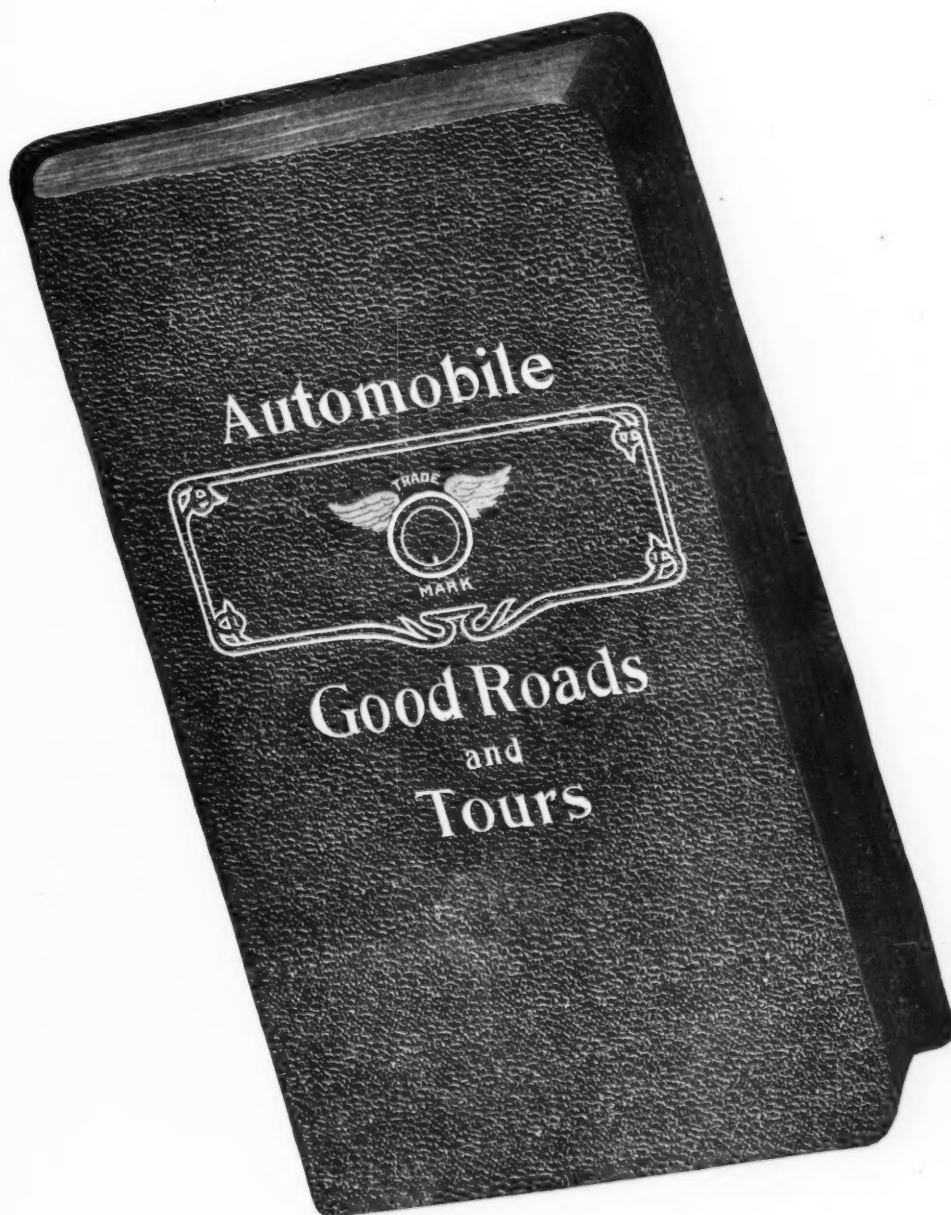
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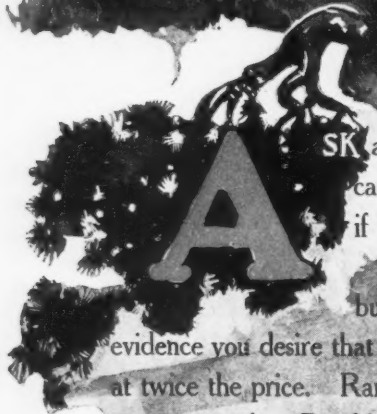
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